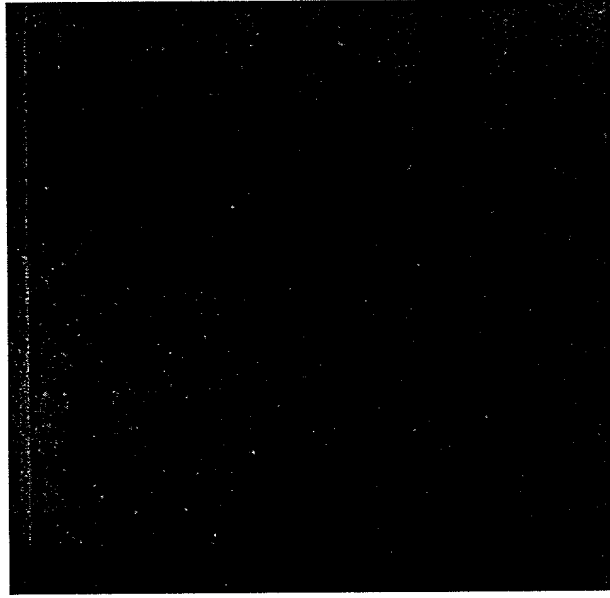


FITC-SA



FITC-gp96

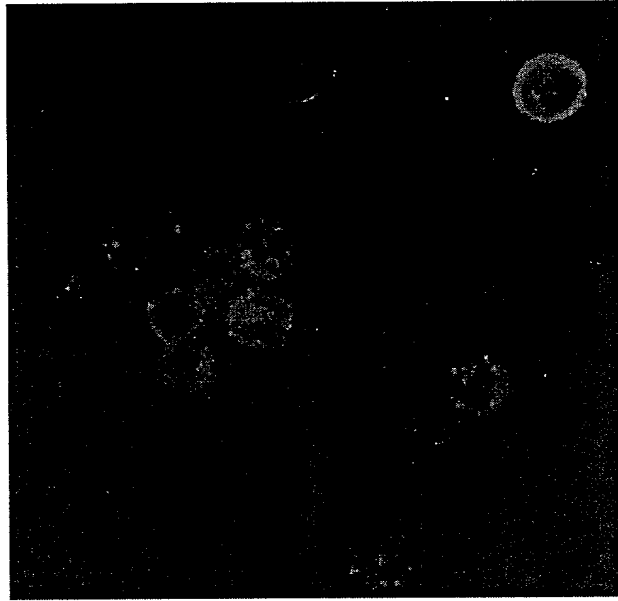


FIG.1A

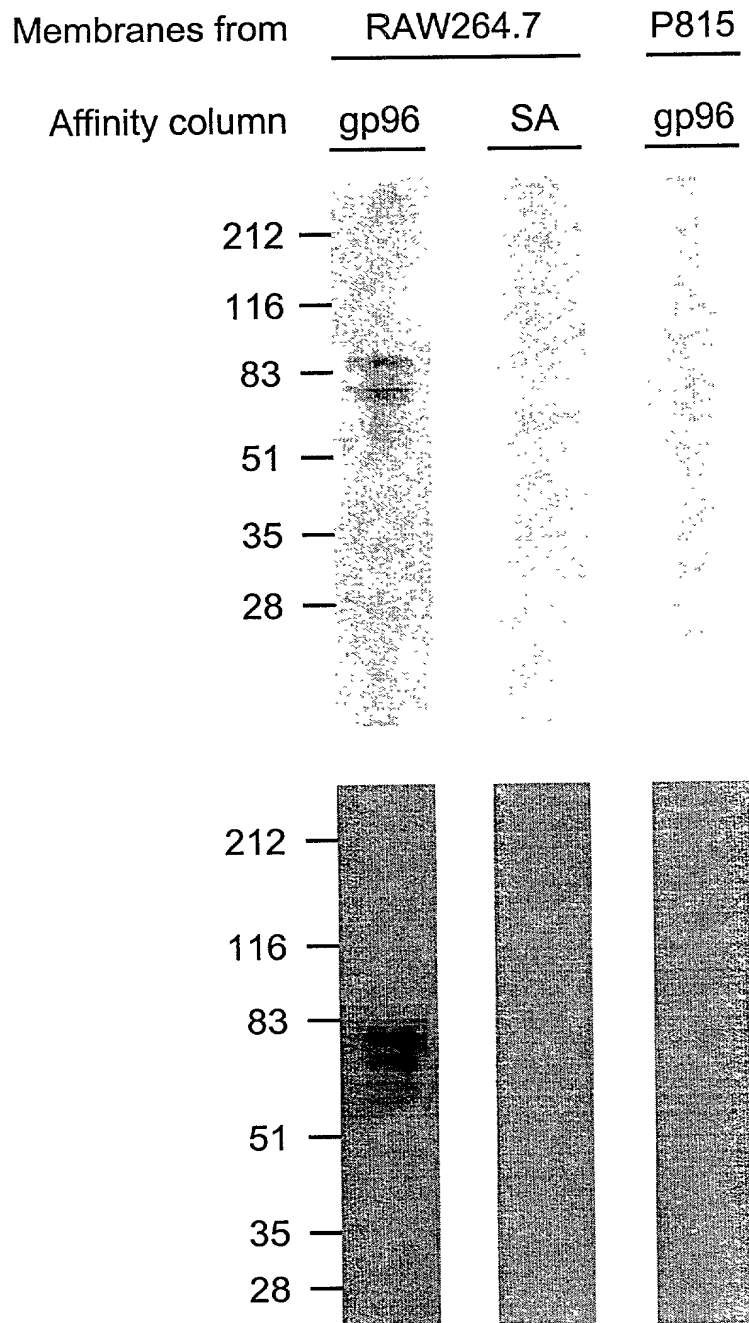


FIG.1B

| | CELL | MO | MO | MO | P815 |
|-----------------------------|------|----|----|----|------|
| ^{125}I -SASD-gp96 | | + | + | + | + |
| UV | | + | - | + | + |
| 2-ME | | + | + | - | + |

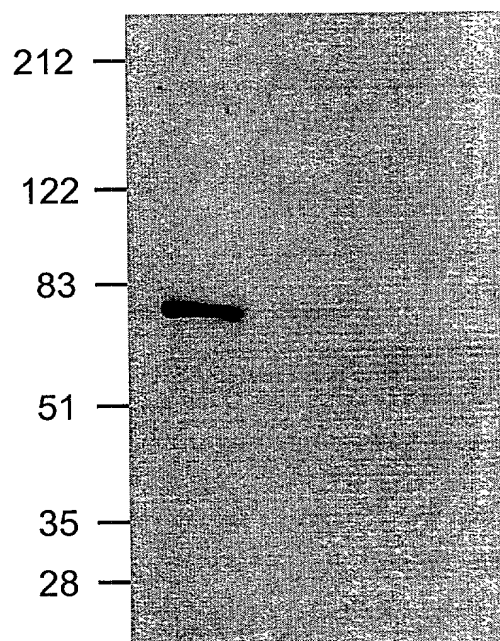


FIG.1 C

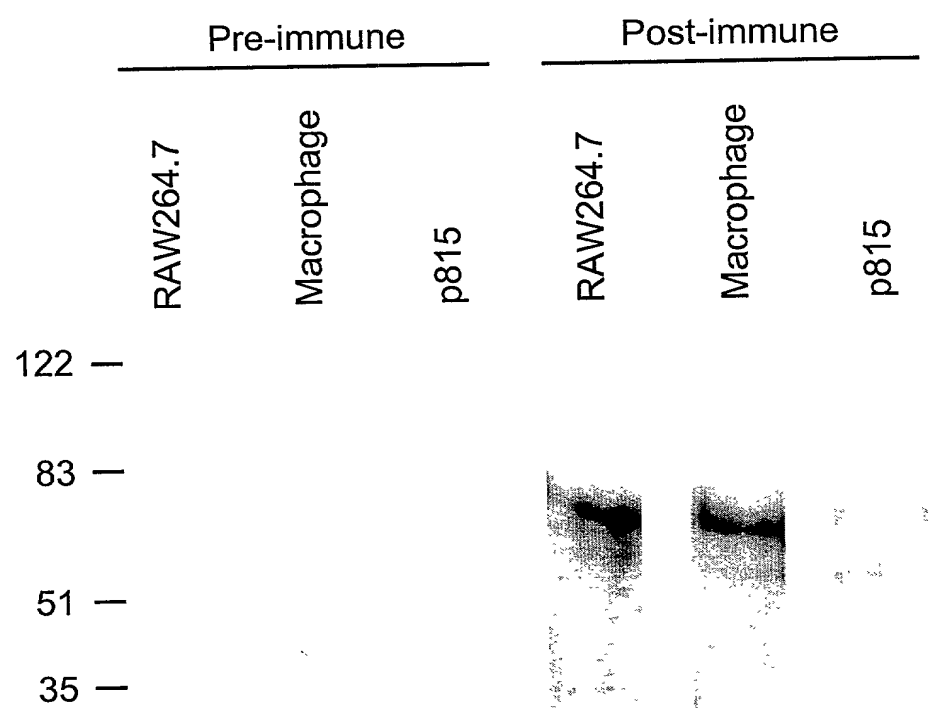


FIG.2A

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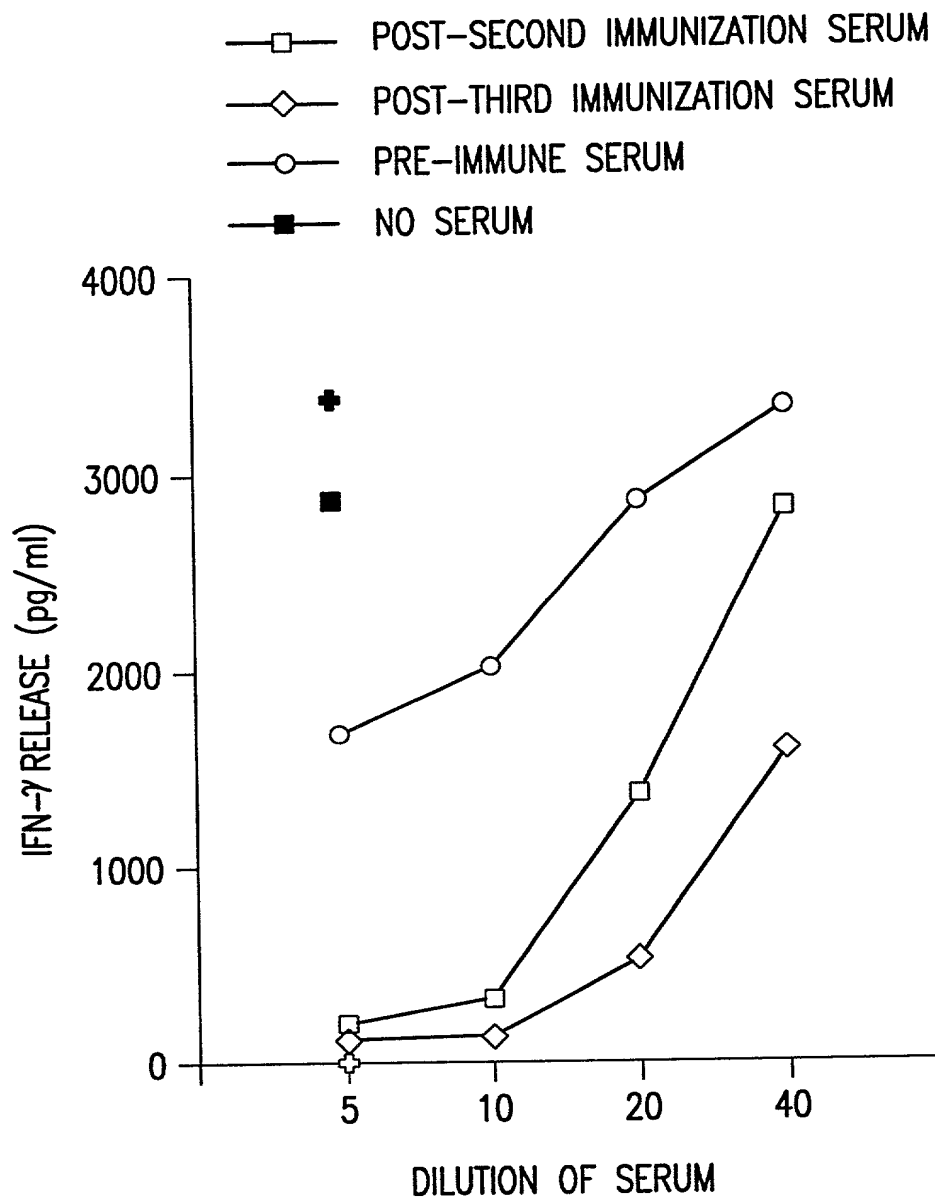


FIG.2B

| <u>Seq</u> | <u>#</u> | <u>b</u> | <u>y</u> | <u>+1</u> |
|------------|----------|----------|----------|-----------|
| G | 1 | 58.1 | - | 10 |
| G | 2 | 115.1 | 1095.2 | 9 |
| A | 3 | 186.2 | 1038.2 | 8 |
| L | 4 | 299.3 | 967.1 | 7 |
| H | 5 | 436.5 | 853.9 | 6 |
| I | 6 | 549.6 | 716.8 | 5 |
| Y | 7 | 712.8 | 603.6 | 4 |
| H | 8 | 850.0 | 440.5 | 3 |
| Q | 9 | 978.1 | 303.3 | 2 |
| R | 10 | - | 175.2 | 1 |

FIG.3A

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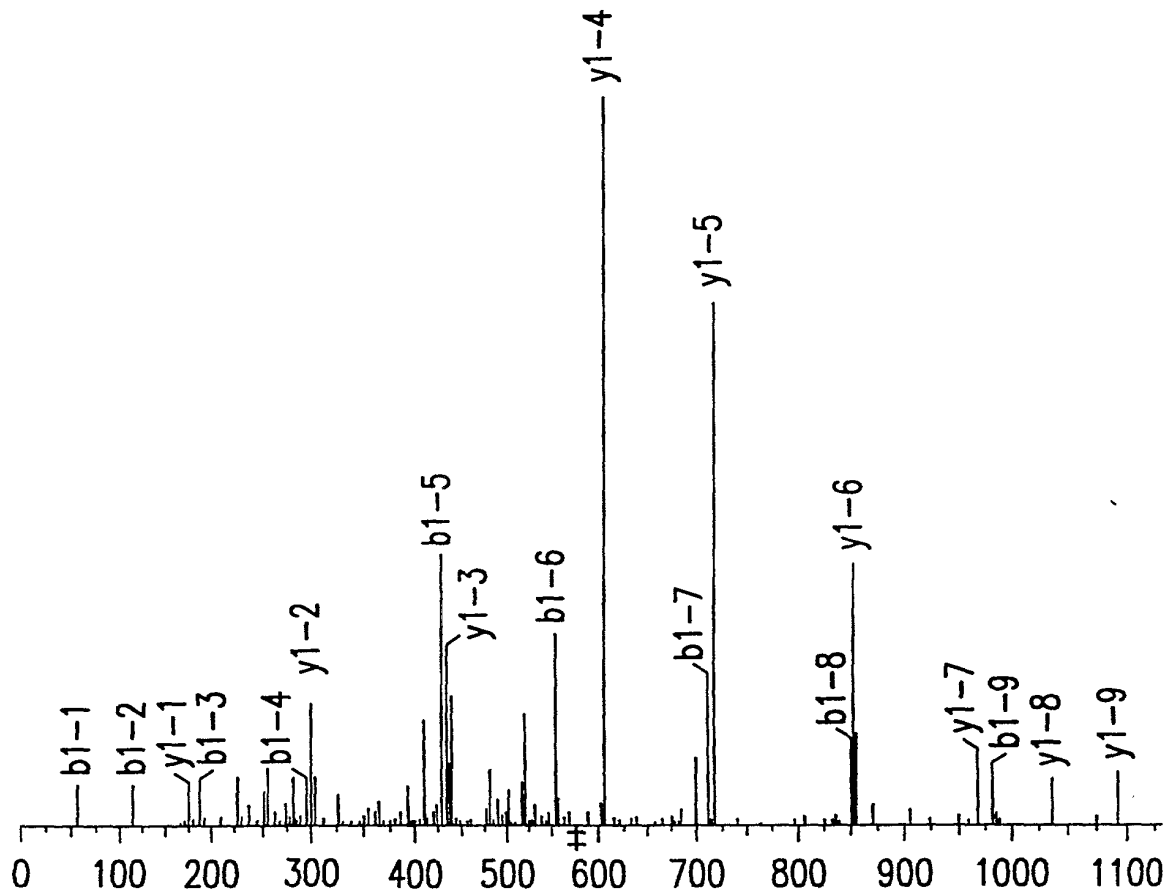


FIG.3B

| POSITION | MH+ | SEQUENCE | |
|----------|-----------|-------------|-----------------|
| 509-518 | 955.0122 | SGFSLGSDGK | (SEQ ID NO: 54) |
| 328-337 | 973.1753 | GIALDPAMGK | (SEQ ID NO: 55) |
| 460-469 | 1152.3010 | GGALHIYHQR | (SEQ ID NO: 56) |
| 338-348 | 1315.5116 | VFFTDYGQIPK | (SEQ ID NO: 57) |

FIG.3C

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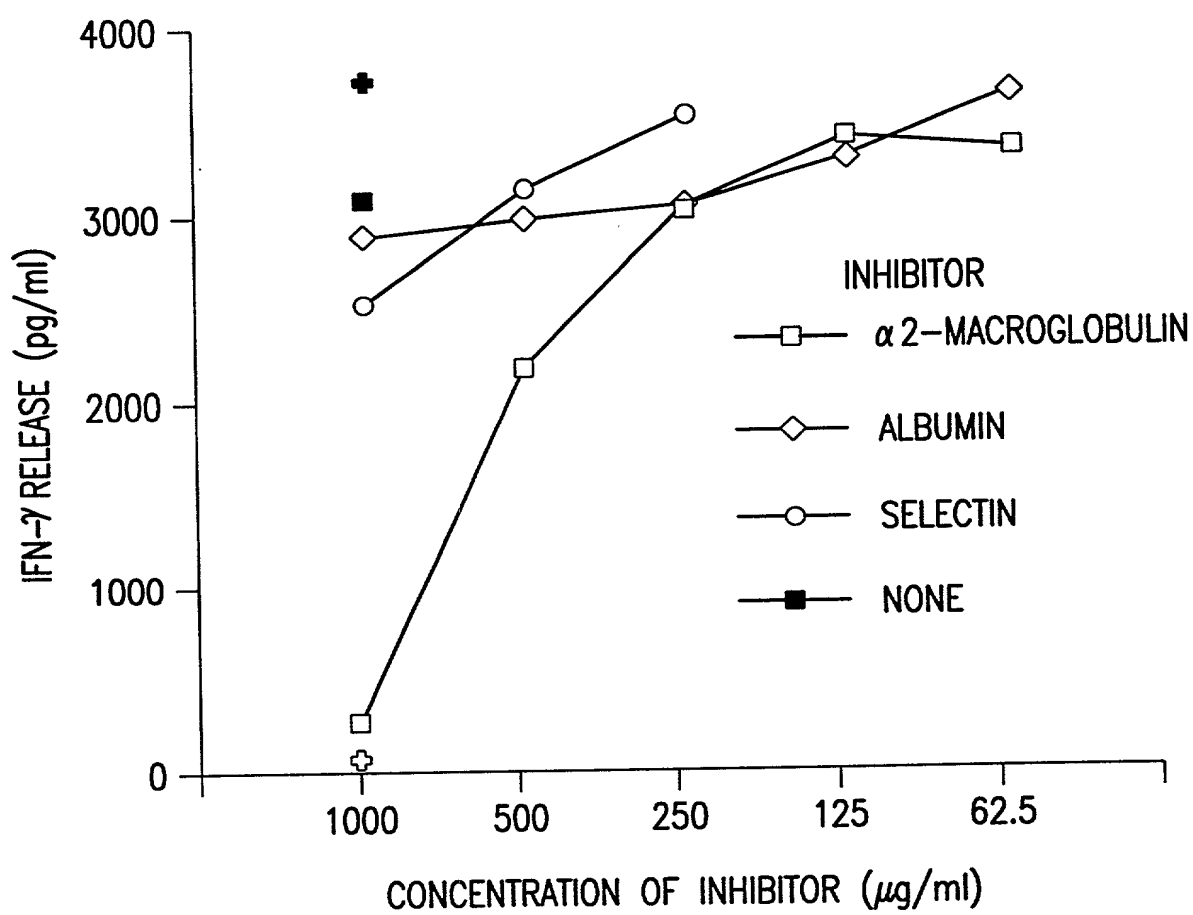


FIG.4

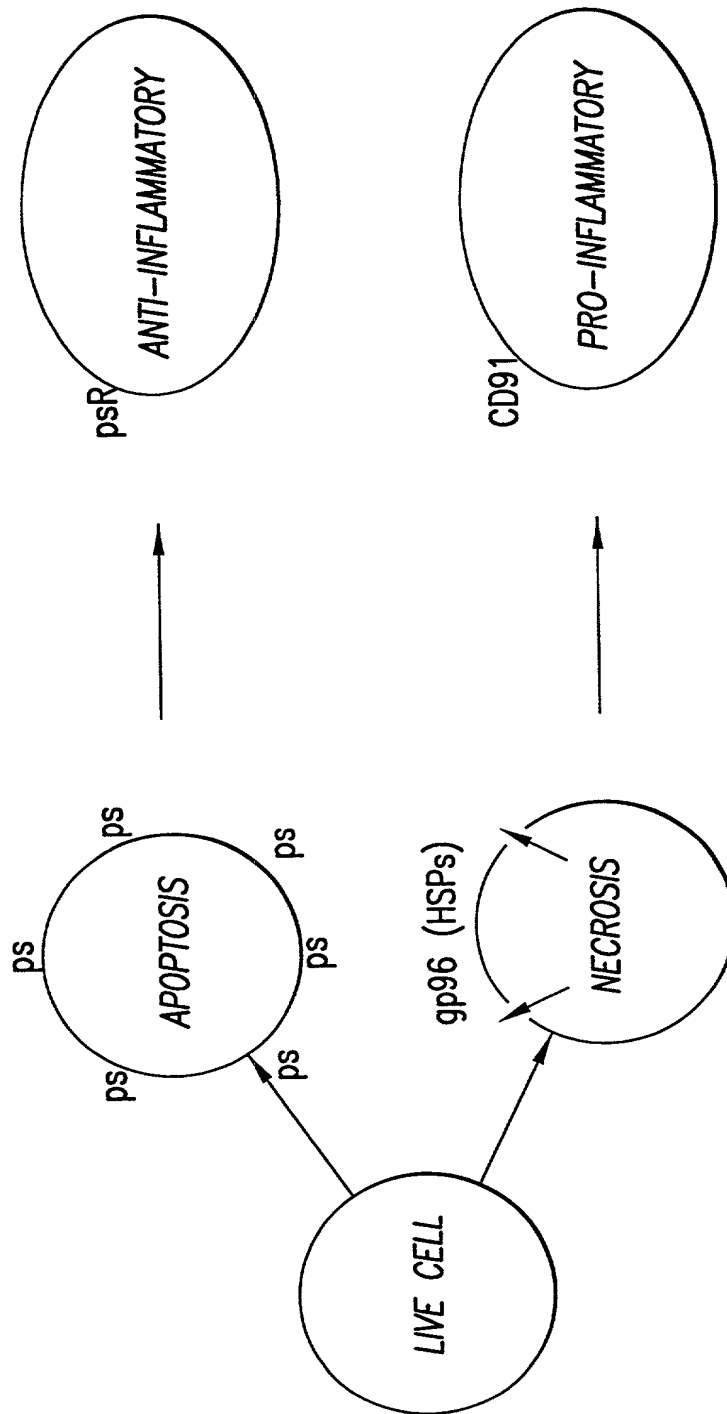


FIG.5

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| | | | | | | |
|-------------|-------------|-----------------------|---------------------|-------------|------------|-----|
| CGCTGCTCCC | CGCCAGTGCA | CTGAGGAGGC | GGAAACGGGG | GAGCCCCTAG | TGCTCCATCA | 60 |
| GGCCCCTACC | AAGGCACCCC | CATCGGGTCC | ACGCCCCCCA | CCCCCACC | CGCCTCCTCC | 120 |
| CAATTGTGCA | TTTTTGCAGC | CGGAGTCGGC | TCCGAGATGG | GGCTGTGAGC | TTCGCCCTGG | 180 |
| GAGGGGGAGA | GGAGCGAGGA | GTAAAGCAGG | GGTGAAGGGT | TCGAATTTGG | GGGCAGGGGG | 240 |
| CGCACCCGCG | TCAGCAGGCC | CTTCCCAGGG | GGCTCGGAAC | TGTACCATT | CACCTATGCC | 300 |
| CCTGGTTTCG | TTTGCTTAAG | GAAGGATAAG | ATAGAAGAGT | CGGGGAGAGG | AAGATAAAGG | 360 |
| GGGACCCCCC | AATTGGGGGG | GGCGAGGACA | AGAAGTAACA | GGACCAGAGG | GTGGGGGCTG | 420 |
| CTGTTTGCAT | CGGCCCACAC | C ATG CTG ACC CCG CCG | TTG CTG CTG CTC GTG | | | 471 |
| | | Met Leu Thr Pro Pro | Leu Leu Leu Leu Val | | | |
| | | 1 | 5 | | 10 | |
| CCG CTG CTT | TCA GCT CTG | GTC TCC GGG | GCC ACT ATG | GAT GCC CCT | AAA | 519 |
| Pro Leu Leu | Ser Ala Leu | Val Ser Gly | Ala Thr Met | Asp Ala Pro | Lys | |
| | 15 | | 20 | | 25 | |
| ACT TGC AGC | CCT AAG CAG | TTT GCC TGC | AGA GAC CAA | ATC ACC TGT | ATC | 567 |
| Thr Cys Ser | Pro Lys Gln | Phe Ala Cys | Arg Asp Gln | Ile Thr Cys | Ile | |
| | 30 | | 35 | | 40 | |
| TCA AAG GGC | TGG CGG TGT | GAC GGT GAA | AGA GAT TGC | CCC GAC GGC | TCT | 615 |
| Ser Lys Gly | Trp Arg Cys | Asp Gly Glu | Arg Asp Cys | Pro Asp Gly | Ser | |
| | 45 | | 50 | | 55 | |
| GAT GAA GCC | CCT GAG ATC | TGT CCA CAG | AGT AAA GCC | CAG AGA TGC | CCG | 663 |
| Asp Glu Ala | Pro Glu Ile | Cys Pro Gln | Ser Lys Ala | Gln Arg Cys | Pro | |
| | 60 | | 65 | | 70 | |
| CCA AAT GAG | CAC AGT TGT | CTG GGG ACT | GAG CTA TGT | GTC CCC ATG | TCT | 711 |
| Pro Asn Glu | His Ser Cys | Leu Gly Thr | Glu Leu Cys | Val Pro Met | Ser | |
| | 75 | | 80 | | 85 | |
| CGT CTC TGC | AAC GGG ATC | CAG GAC TGC | ATG GAT GGC | TCA GAC GAG | GGT | 759 |
| Arg Leu Cys | Asn Gly Ile | Gln Asp Cys | Met Asp Gly | Ser Asp Glu | Gly | |
| | 95 | | 100 | | 105 | |
| GCT CAC TGC | CGA GAG CTC | CGA GCC AAC | TGT TCT CGA | ATG GGT TGT | CAA | 807 |
| Ala His Cys | Arg Glu Leu | Arg Ala Asn | Cys Ser Arg | Met Gly Cys | Gln | |
| | 110 | | 115 | | 120 | |
| CAC CAT TGT | GTA CCT ACA | CCC AGT GGG | CCC ACG TGC | TAC TGT AAC | AGC | 855 |
| His His Cys | Val Pro Thr | Pro Ser Gly | Pro Thr Cys | Tyr Cys Asn | Ser | |
| | 125 | | 130 | | 135 | |

FIG.6A-1

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| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| AGC | TTC | CAG | CTC | GAG | GCA | GAT | GGC | AAG | ACG | TGC | AAA | GAT | TTT | GAC | GAG | 903 |
| Ser | Phe | Gln | Leu | Glu | Ala | Asp | Gly | Lys | Thr | Cys | Lys | Asp | Phe | Asp | Glu | |
| 140 | | | | | | 145 | | | | | 150 | | | | | |
| TGT | TCC | GTG | TAT | GGC | ACC | TGC | AGC | CAG | CTT | TGC | ACC | AAC | ACA | GAT | GGC | 951 |
| Cys | Ser | Val | Tyr | Gly | Thr | Cys | Ser | Gln | Leu | Cys | Thr | Asn | Thr | Asp | Gly | |
| 155 | | | | | 160 | | | | | 165 | | | | | 170 | |
| TCC | TTC | ACA | TGT | GGC | TGT | GTT | GAA | GGC | TAC | CTG | CTG | CAA | CCG | GAC | AAC | 999 |
| Ser | Phe | Thr | Cys | Gly | Cys | Val | Glu | Gly | Tyr | Leu | Leu | Gln | Pro | Asp | Asn | |
| | | | | 175 | | | | | 180 | | | | | 185 | | |
| CGC | TCC | TGC | AAG | GCC | AAG | AAT | GAG | CCA | GTA | GAT | CGG | CCG | CCA | GTG | CTA | 1047 |
| Arg | Ser | Cys | Lys | Ala | Lys | Asn | Glu | Pro | Val | Asp | Arg | Pro | Pro | Val | Leu | |
| | | | 190 | | | | | 195 | | | | | 200 | | | |
| CTG | ATT | GCC | AAC | TCT | CAG | AAC | ATC | CTA | GCT | ACG | TAC | CTG | AGT | GGG | GCC | 1095 |
| Leu | Ile | Ala | Asn | Ser | Gln | Asn | Ile | Leu | Ala | Thr | Tyr | Leu | Ser | Gly | Ala | |
| | | 205 | | | | | 210 | | | | | 215 | | | | |
| CAA | GTG | TCT | ACC | ATC | ACA | CCC | ACC | AGC | ACC | CGA | CAA | ACC | ACG | GCC | ATG | 1143 |
| Gln | Val | Ser | Thr | Ile | Thr | Pro | Thr | Ser | Thr | Arg | Gln | Thr | Thr | Ala | Met | |
| | 220 | | | | | 225 | | | | 230 | | | | | | |
| GAC | TTC | AGT | TAT | GCC | AAT | GAG | ACC | GTA | TGC | TGG | GTG | CAC | GTT | GGG | GAC | 1191 |
| Asp | Phe | Ser | Tyr | Ala | Asn | Glu | Thr | Val | Cys | Trp | Val | His | Val | Gly | Asp | |
| 235 | | | | | 240 | | | | | 245 | | | | 250 | | |
| AGT | GCT | GCC | CAG | ACA | CAG | CTC | AAG | TGT | GCC | CGG | ATG | CCT | GGC | CTG | AAG | 1239 |
| Ser | Ala | Ala | Gln | Thr | Gln | Leu | Lys | Cys | Ala | Arg | Met | Pro | Gly | Leu | Lys | |
| | | | | 255 | | | | | 260 | | | | | 265 | | |
| GGC | TTT | GTG | GAT | GAG | CAT | ACC | ATC | AAC | ATC | TCC | CTC | AGC | CTG | CAC | CAC | 1287 |
| Gly | Phe | Val | Asp | Glu | His | Thr | Ile | Asn | Ile | Ser | Leu | Ser | Leu | His | His | |
| | | | 270 | | | | | 275 | | | | | 280 | | | |
| GTG | GAG | CAG | ATG | GCA | ATC | GAC | TGG | CTG | ACG | GGA | AAC | TTC | TAC | TTT | GTC | 1335 |
| Val | Glu | Gln | Met | Ala | Ile | Asp | Trp | Leu | Thr | Gly | Asn | Phe | Tyr | Phe | Val | |
| | | 285 | | | | | 290 | | | | | 295 | | | | |
| GAC | GAC | ATT | GAC | GAC | AGG | ATC | TTT | GTC | TGT | AAC | CGA | AAC | GGG | GAC | ACC | 1383 |
| Asp | Asp | Ile | Asp | Asp | Arg | Ile | Phe | Val | Cys | Asn | Arg | Asn | Gly | Asp | Thr | |
| | 300 | | | | | 305 | | | | | 310 | | | | | |

FIG.6A-2

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| | |
|---|------|
| TGT GTC ACT CTG CTG GAC CTG GAA CTC TAC AAC CCC AAA GGC ATC GCC | 1431 |
| Cys Val Thr Leu Leu Asp Leu Glu Leu Tyr Asn Pro Lys Gly Ile Ala | |
| 315 320 325 330 | |
| TTG GAC CCC GCC ATG GGG AAG GTG TTC TTC ACT GAC TAC GGG CAG ATC | 1479 |
| Leu Asp Pro Ala Met Gly Lys Val Phe Phe Thr Asp Tyr Gly Gln Ile | |
| 335 340 345 | |
| CCA AAG GTG GAG CGC TGT GAC ATG GAT GGA CAG AAC CGC ACC AAG CTG | 1527 |
| Pro Lys Val Glu Arg Cys Asp Met Asp Gly Gln Asn Arg Thr Lys Leu | |
| 350 355 360 | |
| GTG GAT AGC AAG ATC GTG TTT CCA CAC GGC ATC ACC CTG GAC CTG GTC | 1575 |
| Val Asp Ser Lys Ile Val Phe Pro His Gly Ile Thr Leu Asp Leu Val | |
| 365 370 375 | |
| AGC CGC CTC GTC TAC TGG GCG GAC GCC TAC CTA GAC TAC ATC GAG GTG | 1623 |
| Ser Arg Leu Val Tyr Trp Ala Asp Ala Tyr Leu Asp Tyr Ile Glu Val | |
| 380 385 390 | |
| GTA GAC TAC GAA GGG AAG GGT CGG CAG ACC ATC ATC CAA GGC ATC CTG | 1671 |
| Val Asp Tyr Glu Gly Lys Gly Arg Gln Thr Ile Ile Gln Gly Ile Leu | |
| 395 400 405 410 | |
| ATC GAG CAC CTG TAC GGC CTG ACC GTG TTT GAG AAC TAT CTC TAC GCC | 1719 |
| Ile Glu His Leu Tyr Gly Leu Thr Val Phe Glu Asn Tyr Leu Tyr Ala | |
| 415 420 425 | |
| ACC AAC TCG GAC AAT GCC AAC ACG CAG CAG AAG ACG AGC GTG ATC CGA | 1767 |
| Thr Asn Ser Asp Asn Ala Asn Thr Gln Gln Lys Thr Ser Val Ile Arg | |
| 430 435 440 | |
| GTG AAC CGG TTC AAC AGT ACT GAG TAC CAG GTC GTC ACC CGT GTG GAC | 1815 |
| Val Asn Arg Phe Asn Ser Thr Glu Tyr Gln Val Val Thr Arg Val Asp | |
| 445 450 455 | |
| AAG GGT GGT GCC CTG CAT ATC TAC CAC CAG CGA CGC CAG CCC CGA GTG | 1863 |
| Lys Gly Gly Ala Leu His Ile Tyr His Gln Arg Arg Gln Pro Arg Val | |
| 460 465 470 | |
| CGG AGT CAC GCC TGT GAG AAT GAC CAG TAC GGG AAG CCA GGT GGC TGC | 1911 |
| Arg Ser His Ala Cys Glu Asn Asp Gln Tyr Gly Lys Pro Gly Gly Cys | |
| 475 480 485 490 | |

FIG.6A-3

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| | |
|---|------|
| TCC GAC ATC TGC CTC CTG GCC AAC AGT CAC AAG GCA AGG ACC TGC AGG Ser Asp Ile Cys Leu Leu Ala Asn Ser His Lys Ala Arg Thr Cys Arg 495 500 505 | 1959 |
| TGC AGG TCT GGC TTC AGC CTG GGA AGT GAT GGG AAG TCT TGT AAG AAA Cys Arg Ser Gly Phe Ser Leu Gly Ser Asp Gly Lys Ser Cys Lys Lys 510 515 520 | 2007 |
| CCT GAA CAT GAG CTG TTC CTC GTG TAT GGC AAG GGC CGA CCA GGC ATC Pro Glu His Glu Leu Phe Leu Val Tyr Gly Lys Gly Arg Pro Gly Ile 525 530 535 | 2055 |
| ATT AGA GGC ATG GAC ATG GGG GCC AAG GTC CCA GAT GAG CAC ATG ATC Ile Arg Gly Met Asp Met Gly Ala Lys Val Pro Asp Glu His Met Ile 540 545 550 | 2103 |
| CCC ATC GAG AAC CTT ATG AAT CCA CGC GCT CTG GAC TTC CAC GCC GAG Pro Ile Glu Asn Leu Met Asn Pro Arg Ala Leu Asp Phe His Ala Glu 555 560 565 570 | 2151 |
| ACC GGC TTC ATC TAC TTT GCT GAC ACC ACC AGC TAC CTC ATT GGC CGC Thr Gly Phe Ile Tyr Phe Ala Asp Thr Thr Ser Tyr Leu Ile Gly Arg 575 580 585 | 2199 |
| CAG AAA ATT GAT GGC ACG GAG AGA GAG ACT ATC CTG AAG GAT GGC ATC Gln Lys Ile Asp Gly Thr Glu Arg Glu Thr Ile Leu Lys Asp Gly Ile 590 595 600 | 2247 |
| CAC AAT GTG GAG GGC GTA GCC GTG GAC TGG ATG GGA GAC AAT CTT TAC His Asn Val Glu Gly Val Ala Val Asp Trp Met Gly Asp Asn Leu Tyr 605 610 615 | 2295 |
| TGG ACT GAT GAT GGC CCC AAG AAG ACC ATT AGT GTG GCC AGG CTG GAG Trp Thr Asp Asp Gly Pro Lys Lys Thr Ile Ser Val Ala Arg Leu Glu 620 625 630 | 2343 |
| AAA GCC GCT CAG ACC CGG AAG ACT CTA ATT GAG GGC AAG ATG ACA CAC Lys Ala Ala Gln Thr Arg Lys Thr Leu Ile Glu Gly Lys Met Thr His 635 640 645 650 | 2391 |
| CCC AGG GCC ATT GTA GTG GAT CCA CTC AAT GGG TGG ATG TAC TGG ACA Pro Arg Ala Ile Val Val Asp Pro Leu Asn Gly Trp Met Tyr Trp Thr 655 660 665 | 2439 |

FIG.6A-4

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| | |
|---|------|
| GAC TGG GAG GAG GAC CCC AAG GAC AGT CGG CGA GGG CGG CTC GAG AGG | 2487 |
| Asp Trp Glu Glu Asp Pro Lys Asp Ser Arg Arg Gly Arg Leu Glu Arg | |
| 670 675 680 | |
| GCT TGG ATG GAC GGC TCA CAC CGA GAT ATC TTT GTC ACC TCC AAG ACA | 2535 |
| Ala Trp Met Asp Gly Ser His Arg Asp Ile Phe Val Thr Ser Lys Thr | |
| 685 690 695 | |
| GTG CTT TGG CCC AAT GGG CTA AGC CTG GAT ATC CCA GCC GGA CGC CTC | 2583 |
| Val Leu Trp Pro Asn Gly Leu Ser Leu Asp Ile Pro Ala Gly Arg Leu | |
| 700 705 710 | |
| TAC TGG GTG GAT GCC TTC TAT GAC CGA ATT GAG ACC ATA CTG CTC AAT | 2631 |
| Tyr Trp Val Asp Ala Phe Tyr Asp Arg Ile Glu Thr Ile Leu Leu Asn | |
| 715 720 725 730 | |
| GGC ACA GAC CGG AAG ATT GTA TAT GAG GGT CCT GAA CTG AAT CAT GCC | 2679 |
| Gly Thr Asp Arg Lys Ile Val Tyr Glu Gly Pro Glu Leu Asn His Ala | |
| 735 740 745 | |
| TTC GGC CTG TGT CAC CAT GGC AAC TAC CTC TTT TGG ACC GAG TAC CGG | 2727 |
| Phe Gly Leu Cys His His Gly Asn Tyr Leu Phe Trp Thr Glu Tyr Arg | |
| 750 755 760 | |
| AGC GGC AGC GTC TAC CGC TTG GAA CGG GGC GTG GCA GGC GCA CCG CCC | 2775 |
| Ser Gly Ser Val Tyr Arg Leu Glu Arg Gly Val Ala Gly Ala Pro Pro | |
| 765 770 775 | |
| ACT GTG ACC CTT CTG CGC AGC GAG AGA CCG CCT ATC TTT GAG ATC CGA | 2823 |
| Thr Val Thr Leu Leu Arg Ser Glu Arg Pro Pro Ile Phe Glu Ile Arg | |
| 780 785 790 | |
| ATG TAC GAC GCG CAC GAG CAG CAA GTG GGT ACC AAC AAA TGC CGG GTA | 2871 |
| Met Tyr Asp Ala His Glu Gln Gln Val Gly Thr Asn Lys Cys Arg Val | |
| 795 800 805 810 | |
| AAT AAC GGA GGC TGC AGC AGC CTG TGC CTC GCC ACC CCC GGG AGC CGC | 2919 |
| Asn Asn Gly Gly Cys Ser Ser Leu Cys Leu Ala Thr Pro Gly Ser Arg | |
| 815 820 825 | |
| CAG TGT GCC TGT GCC GAG GAC CAG GTG TTG GAC ACA GAT GGT GTC ACC | 2967 |
| Gln Cys Ala Cys Ala Glu Asp Gln Val Leu Asp Thr Asp Gly Val Thr | |
| 830 835 840 | |

FIG.6A-5

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| | |
|---|------|
| TGC TTG GCG AAC CCA TCC TAC GTG CCC CCA CCC CAG TGC CAG CCG GGC | 3015 |
| Cys Leu Ala Asn Pro Ser Tyr Val Pro Pro Pro Gln Cys Gln Pro Gly | |
| 845 850 855 | |
| CAG TTT GCC TGT GCC AAC AAC CGC TGC ATC CAG GAG CGC TGG AAG TGT | 3063 |
| Gln Phe Ala Cys Ala Asn Asn Arg Cys Ile Gln Glu Arg Trp Lys Cys | |
| 860 865 870 | |
| GAC GGA GAC AAC GAC TGT CTG GAC AAC AGC GAT GAG GCC CCA GCA CTG | 3111 |
| Asp Gly Asp Asn Asp Cys Leu Asp Asn Ser Asp Glu Ala Pro Ala Leu | |
| 875 880 885 890 | |
| TGC CAT CAA CAC ACC TGT CCC TCG GAC CGA TTC AAG TGT GAG AAC AAC | 3159 |
| Cys His Gln His Thr Cys Pro Ser Asp Arg Phe Lys Cys Glu Asn Asn | |
| 895 900 905 | |
| CGG TGT ATC CCC AAC CGC TGG CTC TGT GAT GGG GAT AAT GAT TGT GGC | 3207 |
| Arg Cys Ile Pro Asn Arg Trp Leu Cys Asp Gly Asp Asn Asp Cys Gly | |
| 910 915 920 | |
| AAC AGC GAG GAC GAA TCC AAT GCC ACG TGC TCA GCC CGC ACC TGT CCA | 3255 |
| Asn Ser Glu Asp Glu Ser Asn Ala Thr Cys Ser Ala Arg Thr Cys Pro | |
| 925 930 935 | |
| CCC AAC CAG TTC TCC TGT GCC AGT GGC CGA TGC ATT CCT ATC TCA TGG | 3303 |
| Pro Asn Gln Phe Ser Cys Ala Ser Gly Arg Cys Ile Pro Ile Ser Trp | |
| 940 945 950 | |
| ACC TGT GAT CTG GAT GAT GAC TGT GGG GAC CGG TCC GAT GAG TCA GCC | 3351 |
| Thr Cys Asp Leu Asp Asp Asp Cys Gly Asp Arg Ser Asp Glu Ser Ala | |
| 955 960 965 970 | |
| TCA TGC GCC TAC CCC ACC TGC TTC CCC CTG ACT CAA TTT ACC TGC AAC | 3399 |
| Ser Cys Ala Tyr Pro Thr Cys Phe Pro Leu Thr Gln Phe Thr Cys Asn | |
| 975 980 985 | |
| AAT GGC AGA TGT ATT AAC ATC AAC TGG CGG TGT GAC AAC GAC AAT GAC | 3447 |
| Asn Gly Arg Cys Ile Asn Ile Asn Trp Arg Cys Asp Asn Asp Asn Asp | |
| 990 995 1000 | |
| TGT GGG GAC AAC AGC GAC GAA GCC GGC TGC AGT CAC TCC TGC TCC AGT | 3495 |
| Cys Gly Asp Asn Ser Asp Glu Ala Gly Cys Ser His Ser Cys Ser Ser | |
| 1005 1010 1015 | |

FIG.6A-6

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| | |
|---|------|
| ACC CAG TTC AAG TGC AAC AGT GGC AGA TGC ATC CCC GAG CAC TGG ACG Thr Gln Phe Lys Cys Asn Ser Gly Arg Cys Ile Pro Glu His Trp Thr 1020 1025 1030 | 3543 |
| TGT GAT GGG GAC AAT GAT TGT GGG GAC TAC AGC GAC GAG ACA CAC GCC Cys Asp Gly Asp Asn Asp Cys Gly Asp Tyr Ser Asp Glu Thr His Ala 1035 1040 1045 1050 | 3591 |
| AAC TGT ACC AAC CAG GCT ACA AGA CCT CCT GGT GGC TGC CAC TCG GAT Asn Cys Thr Asn Gln Ala Thr Arg Pro Pro Gly Gly Cys His Ser Asp 1055 1060 1065 | 3639 |
| GAG TTC CAG TGC CCG CTA GAT GGC CTG TGC ATC CCC CTG AGG TGG CGC Glu Phe Gln Cys Pro Leu Asp Gly Leu Cys Ile Pro Leu Arg Trp Arg 1070 1075 1080 | 3687 |
| TGC GAC GGG GAC ACC GAC TGC ATG GAT TCC AGC GAT GAG AAG AGC TGT Cys Asp Gly Asp Thr Asp Cys Met Asp Ser Ser Asp Glu Lys Ser Cys 1085 1090 1095 | 3735 |
| GAG GGC GTG ACC CAT GTT TGT GAC CCG AAT GTC AAG TTT GGC TGC AAG Glu Gly Val Thr His Val Cys Asp Pro Asn Val Lys Phe Gly Cys Lys 1100 1105 1110 | 3783 |
| GAC TCC GCC CGG TGC ATC AGC AAG GCG TGG GTG TGT GAT GGC GAC AGC Asp Ser Ala Arg Cys Ile Ser Lys Ala Trp Val Cys Asp Gly Asp Ser 1115 1120 1125 1130 | 3831 |
| GAC TGT GAA GAT AAC TCC GAC GAG GAG AAC TGT GAG GCC CTG GCC TGC Asp Cys Glu Asp Asn Ser Asp Glu Glu Asn Cys Glu Ala Leu Ala Cys 1135 1140 1145 | 3879 |
| AGG CCA CCC TCC CAT CCC TGC GCC AAC AAC ACC TCT GTC TGC CTG CCT Arg Pro Pro Ser His Pro Cys Ala Asn Asn Thr Ser Val Cys Leu Pro 1150 1155 1160 | 3927 |
| CCT GAC AAG CTG TGC GAC GGC AAG GAT GAC TGT GGA GAC GGC TCG GAT Pro Asp Lys Leu Cys Asp Gly Lys Asp Asp Cys Gly Asp Gly Ser Asp 1165 1170 1175 | 3975 |
| GAG GGC GAG CTC TGT GAC CAG TGT TCT CTG AAT AAT GGT GGC TGT AGT Glu Gly Glu Leu Cys Asp Gln Cys Ser Leu Asn Asn Gly Gly Cys Ser 1180 1185 1190 | 4023 |

FIG.6A-7

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| | |
|---|------|
| CAC AAC TGC TCA GTG GCC CCT GGT GAA GGC ATC GTG TGC TCT TGC CCT His Asn Cys Ser Val Ala Pro Gly Glu Gly Ile Val Cys Ser Cys Pro 1195 1200 1205 1210 | 4071 |
| CTG GGC ATG GAG CTG GGC TCT GAC AAC CAC ACC TGC CAG ATC CAG AGC Leu Gly Met Glu Leu Gly Ser Asp Asn His Thr Cys Gln Ile Gln Ser 1215 1220 1225 | 4119 |
| TAC TGT GCC AAG CAC CTC AAA TGC AGC CAG AAG TGT GAC CAG AAC AAG Tyr Cys Ala Lys His Leu Lys Cys Ser Gln Lys Cys Asp Gln Asn Lys 1230 1235 1240 | 4167 |
| TTC AGT GTG AAG TGC TCC TGC TAC GAG GGC TGG GTC TTG GAG CCT GAC Phe Ser Val Lys Cys Ser Cys Tyr Glu Gly Trp Val Leu Glu Pro Asp 1245 1250 1255 | 4215 |
| GGG GAA ACG TGC CGC AGT CTG GAT CCC TTC AAA CTG TTC ATC ATC TTC Gly Glu Thr Cys Arg Ser Leu Asp Pro Phe Lys Leu Phe Ile Ile Phe 1260 1265 1270 | 4263 |
| TCC AAC CGC CAC GAG ATC AGG CGC ATT GAC CTT CAC AAG GGG GAC TAC Ser Asn Arg His Glu Ile Arg Arg Ile Asp Leu His Lys Gly Asp Tyr 1275 1280 1285 1290 | 4311 |
| AGC GTC CTA GTG CCT GGC CTG CGC AAC ACT ATT GCC CTG GAC TTC CAC Ser Val Leu Val Pro Gly Leu Arg Asn Thr Ile Ala Leu Asp Phe His 1295 1300 1305 | 4359 |
| CTC AGC CAG AGT GCC CTC TAC TGG ACC GAC GCG GTA GAG GAC AAG ATC Leu Ser Gln Ser Ala Leu Tyr Trp Thr Asp Ala Val Glu Asp Lys Ile 1310 1315 1320 | 4407 |
| TAC CGT GGG AAA CTC CTG GAC AAC GGA GCC CTG ACC AGC TTT GAG GTG Tyr Arg Gly Lys Leu Leu Asp Asn Gly Ala Leu Thr Ser Phe Glu Val 1325 1330 1335 | 4455 |
| GTG ATT CAG TAT GGC TTG GCC ACA CCA GAG GGC CTG GCT GTA GAT TGG Val Ile Gln Tyr Gly Leu Ala Thr Pro Glu Gly Leu Ala Val Asp Trp 1340 1345 1350 | 4503 |
| ATT GCA GGC AAC ATC TAC TGG GTG GAG AGC AAC CTG GAC CAG ATC GAA Ile Ala Gly Asn Ile Tyr Trp Val Glu Ser Asn Leu Asp Gln Ile Glu 1355 1360 1365 1370 | 4551 |

FIG.6A-8

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| | |
|---|------|
| GTG GCC AAG CTG GAC GGA ACC CTC CGA ACC ACT CTG CTG GCG GGT GAC Val Ala Lys Leu Asp Gly Thr Leu Arg Thr Thr Leu Leu Ala Gly Asp 1375 1380 1385 | 4599 |
| ATT GAG CAC CCG AGG GCC ATC GCT CTG GAC CCT CGG GAT GGG ATT CTG Ile Glu His Pro Arg Ala Ile Ala Leu Asp Pro Arg Asp Gly Ile Leu 1390 1395 1400 | 4647 |
| TTT TGG ACA GAC TGG GAT GCC AGC CTG CCA CGA ATC GAG GCT GCA TCC Phe Trp Thr Asp Trp Asp Ala Ser Leu Pro Arg Ile Glu Ala Ala Ser 1405 1410 1415 | 4695 |
| ATG AGT GGA GCT GGC CGC CGA ACC ATC CAC CGG GAG ACA GGC TCT GGG Met Ser Gly Ala Gly Arg Arg Thr Ile His Arg Glu Thr Gly Ser Gly 1420 1425 1430 | 4743 |
| GGC TGC GCC AAT GGG CTC ACC GTG GAT TAC CTG GAG AAG CGC ATC CTC Gly Cys Ala Asn Gly Leu Thr Val Asp Tyr Leu Glu Lys Arg Ile Leu 1435 1440 1445 1450 | 4791 |
| TGG ATT GAT GCT AGG TCA GAT GCC ATC TAT TCA GCC CGG TAT GAC GGC Trp Ile Asp Ala Arg Ser Asp Ala Ile Tyr Ser Ala Arg Tyr Asp Gly 1455 1460 1465 | 4839 |
| TCC GGC CAC ATG GAG GTG CTT CGG GGA CAC GAG TTC CTG TCA CAC CCA Ser Gly His Met Glu Val Leu Arg Gly His Glu Phe Leu Ser His Pro 1470 1475 1480 | 4887 |
| TTT GCC GTG ACA CTG TAC GGT GGG GAG GTG TAC TGG ACC GAC TGG CGA Phe Ala Val Thr Leu Tyr Gly Gly Glu Val Tyr Trp Thr Asp Trp Arg 1485 1490 1495 | 4935 |
| ACA AAT ACA CTG GCT AAG GCC AAC AAG TGG ACT GGC CAC AAC GTC ACC Thr Asn Thr Leu Ala Lys Ala Asn Lys Trp Thr Gly His Asn Val Thr 1500 1505 1510 | 4983 |
| GTG GTA CAG AGG ACC AAC ACC CAG CCC TTC GAC CTG CAG GTG TAT CAC Val Val Gln Arg Thr Asn Thr Gln Pro Phe Asp Leu Gln Val Tyr His 1515 1520 1525 1530 | 5031 |
| CCT TCC CGG CAG CCC ATG GCT CCA AAC CCA TGT GAG GCC AAT GGC GGC Pro Ser Arg Gln Pro Met Ala Pro Asn Pro Cys Glu Ala Asn Gly Gly 1535 1540 1545 | 5079 |

FIG.6A-9

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| | |
|---|------|
| CGG GGC CCC TGT TCC CAT CTG TGC CTC ATC AAC TAC AAC CGG ACC GTC Arg Gly Pro Cys Ser His Leu Cys Leu Ile Asn Tyr Asn Arg Thr Val 1550 1555 1560 | 5127 |
| TCC TGG GCC TGT CCC CAC CTC ATG AAG CTG CAC AAG GAC AAC ACC ACC Ser Trp Ala Cys Pro His Leu Met Lys Leu His Lys Asp Asn Thr Thr 1565 1570 1575 | 5175 |
| TGC TAT GAG TTT AAG AAG TTC CTG CTG TAC GCA CGT CAG ATG GAG ATC Cys Tyr Glu Phe Lys Lys Phe Leu Leu Tyr Ala Arg Gln Met Glu Ile 1580 1585 1590 | 5223 |
| CGG GGC GTG GAC CTG GAT GCC CCG TAC TAC AAT TAT ATC ATC TCC TTC Arg Gly Val Asp Leu Asp Ala Pro Tyr Tyr Asn Tyr Ile Ile Ser Phe 1595 1600 1605 1610 | 5271 |
| ACG GTG CCT GAT ATC GAC AAT GTC ACG GTG CTG GAC TAT GAT GCC CGA Thr Val Pro Asp Ile Asp Asn Val Thr Val Leu Asp Tyr Asp Ala Arg 1615 1620 1625 | 5319 |
| GAG CAG CGA GTT TAC TGG TCT GAT GTG CGG ACT CAA GCC ATC AAA AGG Glu Gln Arg Val Tyr Trp Ser Asp Val Arg Thr Gln Ala Ile Lys Arg 1630 1635 1640 | 5367 |
| GCA TTT ATC AAC GGC ACT GGC GTG GAG ACC GTT GTC TCT GCA GAC TTG Ala Phe Ile Asn Gly Thr Gly Val Glu Thr Val Val Ser Ala Asp Leu 1645 1650 1655 | 5415 |
| CCC AAC GCC CAC GGG CTG GCT GTG GAC TGG GTC TCC CGA AAT CTG TTT Pro Asn Ala His Gly Leu Ala Val Asp Trp Val Ser Arg Asn Leu Phe 1660 1665 1670 | 5463 |
| TGG ACA AGT TAC GAC ACC AAC AAG AAG CAG ATT AAC GTG GCC CGG CTG Trp Thr Ser Tyr Asp Thr Asn Lys Lys Gln Ile Asn Val Ala Arg Leu 1675 1680 1685 1690 | 5511 |
| GAC GGC TCC TTC AAG AAT GCG GTG GTG CAG GGC CTG GAG CAG CCC CAC Asp Gly Ser Phe Lys Asn Ala Val Val Gln Gly Leu Glu Gln Pro His 1695 1700 1705 | 5559 |
| GGC CTG GTC GTC CAC CCG CTT CGT GGC AAG CTC TAC TGG ACT GAT GGG Gly Leu Val Val His Pro Leu Arg Gly Lys Leu Tyr Trp Thr Asp Gly 1710 1715 1720 | 5607 |

FIG.6A-10

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| | |
|---|------|
| GAC AAC ATC AGC ATG GCC AAC ATG GAT GGG AGC AAC CAC ACT CTG CTC Asp Asn Ile Ser Met Ala Asn Met Asp Gly Ser Asn His Thr Leu Leu 1725 1730 1735 | 5655 |
| TTC AGT GGC CAG AAG GGC CCT GTG GGG TTG GCC ATT GAC TTC CCT GAG Phe Ser Gly Gln Lys Gly Pro Val Gly Leu Ala Ile Asp Phe Pro Glu 1740 1745 1750 | 5703 |
| AGC AAA CTC TAC TGG ATC AGC TCT GGG AAC CAC ACA ATC AAC CGT TGC Ser Lys Leu Tyr Trp Ile Ser Ser Gly Asn His Thr Ile Asn Arg Cys 1755 1760 1765 1770 | 5751 |
| AAT CTG GAT GGG AGC GAG CTG GAG GTC ATC GAC ACC ATG CGG AGC CAG Asn Leu Asp Gly Ser Glu Leu Glu Val Ile Asp Thr Met Arg Ser Gln 1775 1780 1785 | 5799 |
| CTG GGC AAG GCC ACT GCC CTG GCC ATC ATG GGG GAC AAG CTG TGG TGG Leu Gly Lys Ala Thr Ala Leu Ala Ile Met Gly Asp Lys Leu Trp Trp 1790 1795 1800 | 5847 |
| GCA GAT CAG GTG TCA GAG AAG ATG GGC ACG TGC AAC AAA GCC GAT GGC Ala Asp Gln Val Ser Glu Lys Met Gly Thr Cys Asn Lys Ala Asp Gly 1805 1810 1815 | 5895 |
| TCT GGG TCC GTG GTG CTG CGG AAC AGT ACC ACG TTG GTT ATG CAC ATG Ser Gly Ser Val Val Leu Arg Asn Ser Thr Thr Leu Val Met His Met 1820 1825 1830 | 5943 |
| AAG GTG TAT GAC GAG AGC ATC CAG CTA GAG CAT GAG GGC ACC AAC CCC Lys Val Tyr Asp Glu Ser Ile Gln Leu Glu His Glu Gly Thr Asn Pro 1835 1840 1845 1850 | 5991 |
| TGC AGT GTC AAC AAC GGA GAC TGT TCC CAG CTC TGC CTG CCA ACA TCA Cys Ser Val Asn Asn Gly Asp Cys Ser Gln Leu Cys Leu Pro Thr Ser 1855 1860 1865 | 6039 |
| GAG ACG ACT CGC TCC TGT ATG TGT ACA GCC GGT TAC AGC CTC CGG AGC Glu Thr Thr Arg Ser Cys Met Cys Thr Ala Gly Tyr Ser Leu Arg Ser 1870 1875 1880 | 6087 |
| GGA CAG CAG GCC TGT GAG GGT GTG GGC TCT TTT CTC CTG TAC TCT GTA Gly Gln Gln Ala Cys Glu Gly Val Gly Ser Phe Leu Leu Tyr Ser Val 1885 1890 1895 | 6135 |

FIG.6A-11

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| | |
|---|------|
| CAT GAG GGA ATT CGG GGG ATT CCA CTA GAT CCC AAT GAC AAG TCG GAT His Glu Gly Ile Arg Gly Ile Pro Leu Asp Pro Asn Asp Lys Ser Asp 1900 1905 1910 | 6183 |
| GCC CTG GTC CCA GTG TCC GGA ACT TCA CTG GCT GTC GGA ATC GAC TTC Ala Leu Val Pro Val Ser Gly Thr Ser Leu Ala Val Gly Ile Asp Phe 1915 1920 1925 1930 | 6231 |
| CAT GCC GAA AAT GAC ACT ATT TAT TGG GTG GAT ATG GGC CTA AGC ACC His Ala Glu Asn Asp Thr Ile Tyr Trp Val Asp Met Gly Leu Ser Thr 1935 1940 1945 | 6279 |
| ATC AGC AGG GCC AAG CGT GAC CAG ACA TGG CGA GAG GAT GTG GTG ACC Ile Ser Arg Ala Lys Arg Asp Gln Thr Trp Arg Glu Asp Val Val Thr 1950 1955 1960 | 6327 |
| AAC GGT ATT GGC CGT GTG GAG GGC ATC GCC GTG GAC TGG ATC GCA GGC Asn Gly Ile Gly Arg Val Glu Gly Ile Ala Val Asp Trp Ile Ala Gly 1965 1970 1975 | 6375 |
| AAC ATA TAC TGG ACG GAC CAG GGC TTC GAT GTC ATC GAG GTT GCC CGG Asn Ile Tyr Trp Thr Asp Gln Gly Phe Asp Val Ile Glu Val Ala Arg 1980 1985 1990 | 6423 |
| CTC AAT GGC TCT TTT CGT TAT GTG GTC ATT TCC CAG GGT CTG GAC AAG Leu Asn Gly Ser Phe Arg Tyr Val Val Ile Ser Gln Gly Leu Asp Lys 1995 2000 2005 2010 | 6471 |
| CCT CGG GCC ATC ACT GTC CAC CCA GAG AAG GGG TAC TTG TTC TGG ACC Pro Arg Ala Ile Thr Val His Pro Glu Lys Gly Tyr Leu Phe Trp Thr 2015 2020 2025 | 6519 |
| GAG TGG GGT CAT TAC CCA CGT ATT GAG CGG TCT CGC CTT GAT GGC ACA Glu Trp Gly His Tyr Pro Arg Ile Glu Arg Ser Arg Leu Asp Gly Thr 2030 2035 2040 | 6567 |
| GAG AGA GTG GTG TTG GTT AAT GTC AGC ATC AGC TGG CCC AAT GGC ATC Glu Arg Val Val Leu Val Asn Val Ser Ile Ser Trp Pro Asn Gly Ile 2045 2050 2055 | 6615 |
| TCA GTA GAC TAT CAG GGC GGC AAG CTC TAC TGG TGT GAT GCT CGG ATG Ser Val Asp Tyr Gln Gly Gly Lys Leu Tyr Trp Cys Asp Ala Arg Met 2060 2065 2070 | 6663 |

FIG.6A-12

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| | |
|---|------|
| GAC AAG ATC GAG CGC ATC GAC CTG GAA ACG GGC GAG AAC CGG GAG GTG Asp Lys Ile Glu Arg Ile Asp Leu Glu Thr Gly Glu Asn Arg Glu Val 2075 2080 2085 2090 | 6711 |
| GTC CTG TCC AGC AAT AAC ATG GAT ATG TTC TCC GTG TCC GTG TTT GAG Val Leu Ser Ser Asn Asn Met Asp Met Phe Ser Val Ser Val Phe Glu 2095 2100 2105 | 6759 |
| GAC TTC ATC TAC TGG AGT GAC AGA ACT CAC GCC AAT GGC TCC ATC AAG Asp Phe Ile Tyr Trp Ser Asp Arg Thr His Ala Asn Gly Ser Ile Lys 2110 2115 2120 | 6807 |
| CGC GGC TGC AAA GAC AAT GCT ACA GAC TCC GTG CCT CTG AGG ACA GGC Arg Gly Cys Lys Asp Asn Ala Thr Asp Ser Val Pro Leu Arg Thr Gly 2125 2130 2135 | 6855 |
| ATT GGT GTT CAG CTT AAA GAC ATC AAG GTC TTC AAC AGG GAC AGG CAG Ile Gly Val Gln Leu Lys Asp Ile Lys Val Phe Asn Arg Asp Arg Gln 2140 2145 2150 | 6903 |
| AAG GGT ACC AAT GTG TGC GCG GTA GCC AAC GGC GGG TGC CAG CAG CTC Lys Gly Thr Asn Val Cys Ala Val Ala Asn Gly Gly Cys Gln Gln Leu 2155 2160 2165 2170 | 6951 |
| TGC TTG TAT CGG GGT GGC GGA CAG CGA GCC TGT GCC TGT GCC CAC GGG Cys Leu Tyr Arg Gly Gly Gly Gln Arg Ala Cys Ala Cys Ala His Gly 2175 2180 2185 | 6999 |
| ATG CTG GCA GAA GAC GGG GCC TCA TGC CGA GAG TAC GCT GGC TAC CTG Met Leu Ala Glu Asp Gly Ala Ser Cys Arg Glu Tyr Ala Gly Tyr Leu 2190 2195 2200 | 7047 |
| CTC TAC TCA GAG CGG ACC ATC CTC AAG AGC ATC CAC CTG TCG GAT GAG Leu Tyr Ser Glu Arg Thr Ile Leu Lys Ser Ile His Leu Ser Asp Glu 2205 2210 2215 | 7095 |
| CGT AAC CTC AAC GCA CCG GTG CAG CCC TTT GAA GAC CCC GAG CAC ATG Arg Asn Leu Asn Ala Pro Val Gln Pro Phe Glu Asp Pro Glu His Met 2220 2225 2230 | 7143 |
| AAA AAT GTC ATC GCC CTG GCC TTT GAC TAC CGA GCA GGC ACC TCC CCG Lys Asn Val Ile Ala Leu Ala Phe Asp Tyr Arg Ala Gly Thr Ser Pro 2235 2240 2245 2250 | 7191 |

FIG.6A-13

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| | |
|---|------|
| GGG ACC CCT AAC CGC ATC TTC TTC AGT GAC ATC CAC TTT GGG AAC ATC Gly Thr Pro Asn Arg Ile Phe Phe Ser Asp Ile His Phe Gly Asn Ile 2255 2260 2265 | 7239 |
| CAG CAG ATC AAT GAC GAT GGC TCG GGC AGG ACC ACC ATC GTG GAA AAT Gln Gln Ile Asn Asp Asp Gly Ser Gly Arg Thr Thr Ile Val Glu Asn 2270 2275 2280 | 7287 |
| GTG GGC TCT GTG GAA GGC CTG GCC TAT CAC CGT GGC TGG GAC ACA CTG Val Gly Ser Val Glu Gly Leu Ala Tyr His Arg Gly Trp Asp Thr Leu 2285 2290 2295 | 7335 |
| TAC TGG ACA AGC TAC ACC ACA TCC ACC ATC ACC CGC CAC ACC GTG GAC Tyr Trp Thr Ser Tyr Thr Thr Ser Thr Ile Thr Arg His Thr Val Asp 2300 2305 2310 | 7383 |
| CAG ACT CGC CCA GGG GCC TTC GAG AGG GAG ACA GTC ATC ACC ATG TCC Gln Thr Arg Pro Gly Ala Phe Glu Arg Glu Thr Val Ile Thr Met Ser 2315 2320 2325 2330 | 7431 |
| GGA GAC GAC CAC CCG AGA GCC TTT GTG CTG GAT GAG TGC CAG AAC CTG Gly Asp Asp His Pro Arg Ala Phe Val Leu Asp Glu Cys Gln Asn Leu 2335 2340 2345 | 7479 |
| ATG TTC TGG ACC AAT TGG AAC GAG CTC CAT CCA AGC ATC ATG CGG GCA Met Phe Trp Thr Asn Trp Asn Glu Leu His Pro Ser Ile Met Arg Ala 2350 2355 2360 | 7527 |
| GCC CTA TCC GGA GCC AAC GTC CTG ACC CTC ATT GAG AAG GAC ATC CGC Ala Leu Ser Gly Ala Asn Val Leu Thr Leu Ile Glu Lys Asp Ile Arg 2365 2370 2375 | 7575 |
| ACG CCC AAT GGG TTG GCC ATC GAC CAC CGG GCG GAG AAG CTG TAC TTC Thr Pro Asn Gly Leu Ala Ile Asp His Arg Ala Glu Lys Leu Tyr Phe 2380 2385 2390 | 7623 |
| TCG GAT GCC ACC TTG GAC AAG ATC GAG CGC TGC GAG TAC GAC GGC TCC Ser Asp Ala Thr Leu Asp Lys Ile Glu Arg Cys Glu Tyr Asp Gly Ser 2395 2400 2405 2410 | 7671 |
| CAC CGC TAT GTG ATC CTA AAG TCG GAG CCC GTC CAC CCC TTT GGG TTG His Arg Tyr Val Ile Leu Lys Ser Glu Pro Val His Pro Phe Gly Leu 2415 2420 2425 | 7719 |

FIG.6A-14

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GCG GTG TAC GGA GAG CAC ATT TTC TGG ACT GAC TGG GTG CGG CGG GCT 7767
Ala Val Tyr Gly Glu His Ile Phe Trp Thr Asp Trp Val Arg Arg Ala
2430 2435 2440

GTG CAG CGA GCC AAC AAG TAT GTG GGC AGC GAC ATG AAG CTG CTT CGG 7815
Val Gln Arg Ala Asn Lys Tyr Val Gly Ser Asp Met Lys Leu Leu Arg
2445 2450 2455

GTG GAC ATT CCC CAG CAA CCC ATG GGC ATC ATC GCC GTG GCC AAT GAC 7863
Val Asp Ile Pro Gln Gln Pro Met Gly Ile Ile Ala Val Ala Asn Asp
2460 2465 2470

ACC AAC AGC TGT GAA CTC TCC CCC TGC CGT ATC AAC AAT GGA GGC TGC 7911
Thr Asn Ser Cys Glu Leu Ser Pro Cys Arg Ile Asn Asn Gly Gly Cys
2475 2480 2485 2490

CAG GAT CTG TGT CTG CTC ACC CAC CAA GGC CAC GTC AAC TGT TCC TGT 7959
Gln Asp Leu Cys Leu Leu Thr His Gln Gly His Val Asn Cys Ser Cys
2495 2500 2505

CGA GGG GGC CGG ATC CTC CAG GAG GAC TTC ACC TGC CGG GCT GTG AAC 8007
Arg Gly Gly Arg Ile Leu Gln Glu Asp Phe Thr Cys Arg Ala Val Asn
2510 2515 2520

TCC TCT TGT CGG GCA CAA GAT GAG TTT GAG TGT GCC AAT GGG GAA TGT 8055
Ser Ser Cys Arg Ala Gln Asp Glu Phe Glu Cys Ala Asn Gly Glu Cys
2525 2530 2535

ATC AGC TTC AGC CTC ACC TGT GAT GGC GTC TCC CAC TGC AAG GAC AAG 8103
Ile Ser Phe Ser Leu Thr Cys Asp Gly Val Ser His Cys Lys Asp Lys
2540 2545 2550

TCC GAT GAG AAG CCC TCC TAC TGC AAC TCA CGC CGC TGC AAG AAG ACT 8151
Ser Asp Glu Lys Pro Ser Tyr Cys Asn Ser Arg Arg Cys Lys Lys Thr
2555 2560 2565 2570

TTC CGC CAG TGT AAC AAT GGC CGC TGT GTA TCC AAC ATG CTG TGG TGC 8199
Phe Arg Gln Cys Asn Asn Gly Arg Cys Val Ser Asn Met Leu Trp Cys
2575 2580 2585

AAT GGG GTG GAT TAC TGT GGG GAT GGC TCT GAT GAG ATA CCT TGC AAC 8247
Asn Gly Val Asp Tyr Cys Gly Asp Gly Ser Asp Glu Ile Pro Cys Asn
2590 2595 2600

FIG.6A-15

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| | |
|---|------|
| AAG ACT GCC TGT GGT GTG GGT GAG TTC CGC TGC CGG GAT GGG TCC TGC Lys Thr Ala Cys Gly Val Gly Glu Phe Arg Cys Arg Asp Gly Ser Cys 2605 2610 2615 | 8295 |
| ATC GGG AAC TCC AGT CGC TGC AAC CAG TTT GTG GAT TGT GAG GAT GCC Ile Gly Asn Ser Ser Arg Cys Asn Gln Phe Val Asp Cys Glu Asp Ala 2620 2625 2630 | 8343 |
| TCG GAT GAG ATG AAT TGC AGT GCC ACA GAC TGC AGC AGC TAT TTC CGC Ser Asp Glu Met Asn Cys Ser Ala Thr Asp Cys Ser Ser Tyr Phe Arg 2635 2640 2645 2650 | 8391 |
| CTG GGC GTG AAA GGT GTC CTC TTC CAG CCG TGC GAG CGG ACA TCC CTG Leu Gly Val Lys Gly Val Leu Phe Gln Pro Cys Glu Arg Thr Ser Leu 2655 2660 2665 | 8439 |
| TGC TAC GCA CCT AGC TGG GTG TGT GAT GGC GCC AAC GAC TGT GGA GAC Cys Tyr Ala Pro Ser Trp Val Cys Asp Gly Ala Asn Asp Cys Gly Asp 2670 2675 2680 | 8487 |
| TAC AGC GAT GAA CGT GAC TGT CCA GGT GTG AAG CGC CCT AGG TGC CCG Tyr Ser Asp Glu Arg Asp Cys Pro Gly Val Lys Arg Pro Arg Cys Pro 2685 2690 2695 | 8535 |
| CTC AAT TAC TTT GCC TGC CCC AGC GGG CGC TGT ATC CCC ATG AGC TGG Leu Asn Tyr Phe Ala Cys Pro Ser Gly Arg Cys Ile Pro Met Ser Trp 2700 2705 2710 | 8583 |
| ACG TGT GAC AAG GAG GAT GAC TGT GAG AAC GGC GAG GAT GAG ACC CAC Thr Cys Asp Lys Glu Asp Asp Cys Glu Asn Gly Glu Asp Glu Thr His 2715 2720 2725 2730 | 8631 |
| TGC AAC AAG TTC TGC TCA GAG GCA CAG TTC GAG TGC CAG AAC CAC CGG Cys Asn Lys Phe Cys Ser Glu Ala Gln Phe Glu Cys Gln Asn His Arg 2735 2740 2745 | 8679 |
| TGT ATC TCC AAG CAG TGG CTG TGT GAC GGT AGC GAT GAT TGC GGG GAT Cys Ile Ser Lys Gln Trp Leu Cys Asp Gly Ser Asp Asp Cys Gly Asp 2750 2755 2760 | 8727 |
| GGC TCC GAT GAG GCA GCT CAC TGT GAA GGC AAG ACA TGT GGC CCC TCC Gly Ser Asp Glu Ala Ala His Cys Glu Gly Lys Thr Cys Gly Pro Ser 2765 2770 2775 | 8775 |

FIG.6A-16

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| | |
|---|------|
| TCC TTC TCC TGT CCC GGC ACC CAC GTG TGT GTC CCT GAG CGC TGG CTC | 8823 |
| Ser Phe Ser Cys Pro Gly Thr His Val Cys Val Pro Glu Arg Trp Leu | |
| 2780 2785 2790 | |
| TGT GAT GGC GAC AAG GAC TGT ACC GAT GGC GCG GAT GAG AGT GTC ACT | 8871 |
| Cys Asp Gly Asp Lys Asp Cys Thr Asp Gly Ala Asp Glu Ser Val Thr | |
| 2795 2800 2805 2810 | |
| GCT GGC TGC CTG TAC AAC AGC ACC TGT GAT GAC CGT GAG TTC ATG TGC | 8919 |
| Ala Gly Cys Leu Tyr Asn Ser Thr Cys Asp Asp Arg Glu Phe Met Cys | |
| 2815 2820 2825 | |
| CAG AAC CGC TTG TGT ATT CCC AAG CAT TTC GTG TGC GAC CAT GAC CGT | 8967 |
| Gln Asn Arg Leu Cys Ile Pro Lys His Phe Val Cys Asp His Asp Arg | |
| 2830 2835 2840 | |
| GAC TGT GCT GAT GGC TCT GAT GAA TCC CCT GAG TGT GAG TAC CCA ACC | 9015 |
| Asp Cys Ala Asp Gly Ser Asp Glu Ser Pro Glu Cys Glu Tyr Pro Thr | |
| 2845 2850 2855 | |
| TGC GGG CCC AAT GAA TTC CGC TGT GCC AAT GGG CGT TGT CTG AGC TCC | 9063 |
| Cys Gly Pro Asn Glu Phe Arg Cys Ala Asn Gly Arg Cys Leu Ser Ser | |
| 2860 2865 2870 | |
| CGT CAG TGG GAA TGT GAT GGG GAG AAT GAC TGT CAC GAC CAC AGC GAT | 9111 |
| Arg Gln Trp Glu Cys Asp Gly Glu Asn Asp Cys His Asp His Ser Asp | |
| 2875 2880 2885 2890 | |
| GAG GCT CCC AAG AAC CCA CAC TGC ACC AGC CCA GAG CAC AAA TGC AAT | 9159 |
| Glu Ala Pro Lys Asn Pro His Cys Thr Ser Pro Glu His Lys Cys Asn | |
| 2895 2900 2905 | |
| GCC TCA TCA CAG TTC CTG TGC AGC AGC GGG CGC TGC GTG GCT GAG GCG | 9207 |
| Ala Ser Ser Gln Phe Leu Cys Ser Ser Gly Arg Cys Val Ala Glu Ala | |
| 2910 2915 2920 | |
| TTG CTC TGC AAC GGC CAG GAC GAC TGT GGG GAC GGT TCA GAC GAA CGC | 9255 |
| Leu Leu Cys Asn Gly Gln Asp Asp Cys Gly Asp Gly Ser Asp Glu Arg | |
| 2925 2930 2935 | |
| GGG TGC CAT GTC AAC GAG TGT CTC AGC CGC AAG CTC AGT GGC TGC AGT | 9303 |
| Gly Cys His Val Asn Glu Cys Leu Ser Arg Lys Leu Ser Gly Cys Ser | |
| 2940 2945 2950 | |

FIG.6A-17

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| | |
|---|------|
| CAG GAC TGC GAG GAC CTC AAG ATA GGC TTT AAG TGC CGC TGT CGC CCG Gln Asp Cys Glu Asp Leu Lys Ile Gly Phe Lys Cys Arg Cys Arg Pro 2955 2960 2965 2970 | 9351 |
| GGC TTC CGG CTA AAG GAC GAT GGC AGG ACC TGT GCC GAC CTG GAT GAG Gly Phe Arg Leu Lys Asp Asp Gly Arg Thr Cys Ala Asp Leu Asp Glu 2975 2980 2985 | 9399 |
| TGC AGC ACC ACC TTC CCC TGC AGC CAG CTC TGC ATC AAC ACC CAC GGA Cys Ser Thr Thr Phe Pro Cys Ser Gln Leu Cys Ile Asn Thr His Gly 2990 2995 3000 | 9447 |
| AGT TAC AAG TGT CTG TGT GTG GAG GGC TAT GCA CCC CGT GGC GGT GAC Ser Tyr Lys Cys Leu Cys Val Glu Gly Tyr Ala Pro Arg Gly Gly Asp 3005 3010 3015 | 9495 |
| CCC CAC AGC TGC AAA GCT GTG ACC GAT GAG GAG CCA TTT CTC ATC TTT Pro His Ser Cys Lys Ala Val Thr Asp Glu Glu Pro Phe Leu Ile Phe 3020 3025 3030 | 9543 |
| GCC AAC CGG TAC TAC CTG CGG AAG CTC AAC CTG GAC GGC TCC AAC TAC Ala Asn Arg Tyr Tyr Leu Arg Lys Leu Asn Leu Asp Gly Ser Asn Tyr 3035 3040 3045 3050 | 9591 |
| ACA CTG CTT AAG CAG GGC CTG AAC AAT GCG GTC GCC TTG GCA TTT GAC Thr Leu Leu Lys Gln Gly Leu Asn Asn Ala Val Ala Leu Ala Phe Asp 3055 3060 3065 | 9639 |
| TAC CGA GAG CAG ATG ATC TAC TGG ACG GGC GTG ACC ACC CAG GGC AGC Tyr Arg Glu Gln Met Ile Tyr Trp Thr Gly Val Thr Thr Gln Gly Ser 3070 3075 3080 | 9687 |
| ATG ATT CGC AGG ATG CAC CTC AAC GGC AGC AAC GTG CAG GTT CTG CAC Met Ile Arg Arg Met His Leu Asn Gly Ser Asn Val Gln Val Leu His 3085 3090 3095 | 9735 |
| CGG ACG GGC CTT AGT AAC CCA GAT GGG CTC GCT GTG GAC TGG GTG GGT Arg Thr Gly Leu Ser Asn Pro Asp Gly Leu Ala Val Asp Trp Val Gly 3100 3105 3110 | 9783 |
| GGC AAC CTG TAC TGG TGT GAC AAG GGC AGA GAT ACC ATT GAG GTG TCC Gly Asn Leu Tyr Trp Cys Asp Lys Gly Arg Asp Thr Ile Glu Val Ser 3115 3120 3125 3130 | 9831 |

FIG.6A-18

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| | |
|---|-------|
| AAG CTT AAC GGG GCC TAT CGG ACA GTG CTG GTC AGC TCT GGC CTC CGG Lys Leu Asn Gly Ala Tyr Arg Thr Val Leu Val Ser Ser Gly Leu Arg 3135 3140 3145 | 9879 |
| GAG CCC AGA GCT CTG GTA GTG GAT GTA CAG AAT GGG TAC CTG TAC TGG Glu Pro Arg Ala Leu Val Val Asp Val Gln Asn Gly Tyr Leu Tyr Trp 3150 3155 3160 | 9927 |
| ACA GAC TGG GGT GAC CAC TCA CTG ATC GGC CGG ATT GGC ATG GAT GGA Thr Asp Trp Gly Asp His Ser Leu Ile Gly Arg Ile Gly Met Asp Gly 3165 3170 3175 | 9975 |
| TCT GGC CGC AGC ATC ATC GTG GAC ACT AAG ATC ACA TGG CCC AAT GGC Ser Gly Arg Ser Ile Ile Val Asp Thr Lys Ile Thr Trp Pro Asn Gly 3180 3185 3190 | 10023 |
| CTG ACC GTG GAC TAC GTC ACG GAA CGC ATC TAC TGG GCT GAC GCC CGT Leu Thr Val Asp Tyr Val Thr Glu Arg Ile Tyr Trp Ala Asp Ala Arg 3195 3200 3205 3210 | 10071 |
| GAG GAC TAC ATC GAG TTC GCC AGC CTG GAT GGC TCC AAC CGT CAC GTT Glu Asp Tyr Ile Glu Phe Ala Ser Leu Asp Gly Ser Asn Arg His Val 3215 3220 3225 | 10119 |
| GTG CTG AGC CAA GAC ATC CCA CAC ATC TTT GCG CTG ACC CTA TTT GAA Val Leu Ser Gln Asp Ile Pro His Ile Phe Ala Leu Thr Leu Phe Glu 3230 3235 3240 | 10167 |
| GAC TAC GTC TAC TGG ACA GAC TGG GAA ACG AAG TCC ATC AAC CGG GCC Asp Tyr Val Tyr Trp Thr Asp Trp Glu Thr Lys Ser Ile Asn Arg Ala 3245 3250 3255 | 10215 |
| CAC AAG ACC ACG GGT GCC AAC AAA ACA CTC CTC ATC AGC ACC CTG CAC His Lys Thr Thr Gly Ala Asn Lys Thr Leu Leu Ile Ser Thr Leu His 3260 3265 3270 | 10263 |
| CGG CCC ATG GAC TTA CAT GTA TTC CAC GCC CTG CGC CAG CCA GAT GTG Arg Pro Met Asp Leu His Val Phe His Ala Leu Arg Gln Pro Asp Val 3275 3280 3285 3290 | 10311 |
| CCC AAT CAC CCC TGC AAA GTC AAC AAT GGT GGC TGC AGC AAC CTG TGC Pro Asn His Pro Cys Lys Val Asn Asn Gly Gly Cys Ser Asn Leu Cys 3295 3300 3305 | 10359 |

FIG.6A-19

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CTG CTG TCC CCT GGG GGT GGT CAC AAG TGC GCC TGC CCC ACC AAC TTC 10407
 Leu Leu Ser Pro Gly Gly Gly His Lys Cys Ala Cys Pro Thr Asn Phe
 3310 3315 3320

TAT CTG GGT GGC GAT GGC CGT ACC TGT GTG TCC AAC TGC ACA GCA AGC 10455
 Tyr Leu Gly Gly Asp Gly Arg Thr Cys Val Ser Asn Cys Thr Ala Ser
 3325 3330 3335

CAG TTT GTG TGC AAA AAT GAC AAG TGC ATC CCC TTC TGG TGG AAG TGT 10503
 Gln Phe Val Cys Lys Asn Asp Lys Cys Ile Pro Phe Trp Trp Lys Cys
 3340 3345 3350

GAC ACG GAG GAC GAC TGT GGG GAT CAC TCA GAC GAG CCT CCA GAC TGT 10551
 Asp Thr Glu Asp Asp Cys Gly Asp His Ser Asp Glu Pro Pro Asp Cys
 3355 3360 3365 3370

CCC GAG TTC AAG TGC CGC CCA GGC CAG TTC CAG TGC TCC ACC GGC ATC 10599
 Pro Glu Phe Lys Cys Arg Pro Gly Gln Phe Gln Cys Ser Thr Gly Ile
 3375 3380 3385

TGC ACC AAC CCT GCC TTC ATC TGT GAT GGG GAC AAT GAC TGC CAA GAC 10647
 Cys Thr Asn Pro Ala Phe Ile Cys Asp Gly Asp Asn Asp Cys Gln Asp
 3390 3395 3400

AAT AGT GAC GAG GCC AAT TGC GAC ATT CAC GTC TGC TTG CCC AGC CAA 10695
 Asn Ser Asp Glu Ala Asn Cys Asp Ile His Val Cys Leu Pro Ser Gln
 3405 3410 3415

TTC AAG TGC ACC AAC ACC AAC CGC TGC ATT CCT GGC ATC TTC CGT TGC 10743
 Phe Lys Cys Thr Asn Thr Asn Arg Cys Ile Pro Gly Ile Phe Arg Cys
 3420 3425 3430

AAT GGG CAG GAC AAC TGC GGG GAC GGC GAG GAT GAG CGG GAT TGC CCT 10791
 Asn Gly Gln Asp Asn Cys Gly Asp Gly Glu Asp Glu Arg Asp Cys Pro
 3435 3440 3445 3450

GAG GTG ACC TGC GCC CCC AAC CAG TTC CAG TGC TCC ATC ACC AAG CGC 10839
 Glu Val Thr Cys Ala Pro Asn Gln Phe Gln Cys Ser Ile Thr Lys Arg
 3455 3460 3465

TGC ATC CCT CGC GTC TGG GTC TGT GAC AGG GAT AAT CAC TGT GTG GAC 10887
 Cys Ile Pro Arg Val Trp Val Cys Asp Arg Asp Asn His Cys Val Asp
 3470 3475 3480

FIG.6A-20

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| | |
|---|-------|
| GGC AGT GAT GAG CCT GCC AAC TGT ACC CAA ATG ACC TGT GGA GTG GAT Gly Ser Asp Glu Pro Ala Asn Cys Thr Gln Met Thr Cys Gly Val Asp 3485 3490 3495 | 10935 |
| GAG TTC CGC TGC AAG GAT TCT GGC CGC TGC ATC CCC GCG CGC TGG AAG Glu Phe Arg Cys Lys Asp Ser Gly Arg Cys Ile Pro Ala Arg Trp Lys 3500 3505 3510 | 10983 |
| TGT GAC GGA GAA GAT GAC TGT GGG GAT GGT TCA GAT GAG CCC AAG GAA Cys Asp Gly Glu Asp Asp Cys Gly Asp Gly Ser Asp Glu Pro Lys Glu 3515 3520 3525 3530 | 11031 |
| GAG TGT GAT GAG CGC ACC TGT GAG CCA TAC CAG TTC CGC TGC AAA AAC Glu Cys Asp Glu Arg Thr Cys Glu Pro Tyr Gln Phe Arg Cys Lys Asn 3535 3540 3545 | 11079 |
| AAC CGC TGT GTC CCA GGC CGT TGG CAA TGT GAC TAC GAC AAC GAC TGC Asn Arg Cys Val Pro Gly Arg Trp Gln Cys Asp Tyr Asp Asn Asp Cys 3550 3555 3560 | 11127 |
| GGA GAT AAC TCG GAC GAG GAG AGC TGC ACA CCT CGG CCC TGC TCT GAG Gly Asp Asn Ser Asp Glu Glu Ser Cys Thr Pro Arg Pro Cys Ser Glu 3565 3570 3575 | 11175 |
| AGT GAG TTT TTC TGT GCC AAT GGC CGC TGC ATC GCT GGG CGC TGG AAG Ser Glu Phe Phe Cys Ala Asn Gly Arg Cys Ile Ala Gly Arg Trp Lys 3580 3585 3590 | 11223 |
| TGT GAT GGG GAC CAT GAC TGT GCC GAC GGC TCA GAC GAG AAA GAC TGC Cys Asp Gly Asp His Asp Cys Ala Asp Gly Ser Asp Glu Lys Asp Cys 3595 3600 3605 3610 | 11271 |
| ACC CCC CGC TGT GAT ATG GAC CAG TTC CAG TGC AAG AGT GGC CAC TGC Thr Pro Arg Cys Asp Met Asp Gln Phe Gln Cys Lys Ser Gly His Cys 3615 3620 3625 | 11319 |
| ATC CCC CTG CGC TGG CCG TGT GAC GCG GAT GCT GAC TGT ATG GAC GGC Ile Pro Leu Arg Trp Pro Cys Asp Ala Asp Ala Asp Cys Met Asp Gly 3630 3635 3640 | 11367 |
| AGT GAC GAG GAA GCC TGT GGC ACT GGG GTG AGG ACC TGC CCA TTG GAT Ser Asp Glu Glu Ala Cys Gly Thr Gly Val Arg Thr Cys Pro Leu Asp 3645 3650 3655 | 11415 |

FIG.6A-21

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| | |
|---|-------|
| GAG TTT CAA TGT AAC AAC ACC TTG TGC AAG CCG CTG GCC TGG AAG TGT Glu Phe Gln Cys Asn Asn Thr Leu Cys Lys Pro Leu Ala Trp Lys Cys 3660 3665 3670 | 11463 |
| GAT GGA GAG GAC GAC TGT GGG GAC AAC TCA GAT GAG AAC CCC GAG GAA Asp Gly Glu Asp Asp Cys Gly Asp Asn Ser Asp Glu Asn Pro Glu Glu 3675 3680 3685 3690 | 11511 |
| TGC GCC CGG TTC ATC TGC CCT CCC AAC CGG CCT TTC CGC TGC AAG AAT Cys Ala Arg Phe Ile Cys Pro Pro Asn Arg Pro Phe Arg Cys Lys Asn 3695 3700 3705 | 11559 |
| GAC CGA GTC TGC CTG TGG ATT GGG CGC CAG TGT GAT GGC GTG GAC AAC Asp Arg Val Cys Leu Trp Ile Gly Arg Gln Cys Asp Gly Val Asp Asn 3710 3715 3720 | 11607 |
| TGT GGA GAT GGG ACT GAC GAG GAG GAC TGT GAG CCC CCC ACG GCC CAG Cys Gly Asp Gly Thr Asp Glu Glu Asp Cys Glu Pro Pro Thr Ala Gln 3725 3730 3735 | 11655 |
| AAC CCC CAC TGC AAA GAC AAG AAG GAG TTC CTG TGC CGA AAC CAG CGC Asn Pro His Cys Lys Asp Lys Lys Glu Phe Leu Cys Arg Asn Gln Arg 3740 3745 3750 | 11703 |
| TGT CTA TCA TCC TCC CTG CGC TGT AAC ATG TTC GAT GAC TGC GGC GAT Cys Leu Ser Ser Ser Leu Arg Cys Asn Met Phe Asp Asp Cys Gly Asp 3755 3760 3765 3770 | 11751 |
| GGC TCC GAT GAA GAA GAT TGC AGC ATC GAC CCC AAG CTG ACC AGC TGT Gly Ser Asp Glu Glu Asp Cys Ser Ile Asp Pro Lys Leu Thr Ser Cys 3775 3780 3785 | 11799 |
| GCC ACC AAT GCC AGC ATG TGT GGG GAC GAA GCT CGT TGT GTG CGC ACT Ala Thr Asn Ala Ser Met Cys Gly Asp Glu Ala Arg Cys Val Arg Thr 3790 3795 3800 | 11847 |
| GAG AAA GCT GCC TAC TGT GCC TGC CGC TCG GGC TTC CAT ACT GTG CCG Glu Lys Ala Ala Tyr Cys Ala Cys Arg Ser Gly Phe His Thr Val Pro 3805 3810 3815 | 11895 |
| GGC CAG CCC GGA TGC CAG GAC ATC AAC GAG TGC CTG CGC TTT GGT ACC Gly Gln Pro Gly Cys Gln Asp Ile Asn Glu Cys Leu Arg Phe Gly Thr 3820 3825 3830 | 11943 |

FIG.6A-22

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| | |
|---|-------|
| TGC TCT CAG CTC TGG AAC AAA CCC AAG GGA GGC CAC CTC TGC AGC TGT Cys Ser Gln Leu Trp Asn Lys Pro Lys Gly Gly His Leu Cys Ser Cys 3835 3840 3845 3850 | 11991 |
| GCC CGC AAC TTC ATG AAG ACA CAC AAC ACC TGC AAA GCT GAA GGC TCC Ala Arg Asn Phe Met Lys Thr His Asn Thr Cys Lys Ala Glu Gly Ser 3855 3860 3865 | 12039 |
| GAG TAC CAG GTG CTA TAC ATC GCG GAT GAC AAC GAG ATC CGC AGC TTG Glu Tyr Gln Val Leu Tyr Ile Ala Asp Asp Asn Glu Ile Arg Ser Leu 3870 3875 3880 | 12087 |
| TTC CCG GGC CAC CCC CAC TCA GCC TAC GAG CAG ACA TTC CAG GGC GAT Phe Pro Gly His Pro His Ser Ala Tyr Glu Gln Thr Phe Gln Gly Asp 3885 3890 3895 | 12135 |
| GAG AGT GTC CGC ATA GAT GCC ATG GAT GTC CAT GTC AAG GCC GGC CGT Glu Ser Val Arg Ile Asp Ala Met Asp Val His Val Lys Ala Gly Arg 3900 3905 3910 | 12183 |
| GTC TAC TGG ACT AAC TGG CAC ACG GGC ACA ATC TCC TAC AGG AGC CTG Val Tyr Trp Thr Asn Trp His Thr Gly Thr Ile Ser Tyr Arg Ser Leu 3915 3920 3925 3930 | 12231 |
| CCC CCT GCC GCC CCT CCT ACC ACT TCC AAC CGC CAC CGG AGG CAG ATC Pro Pro Ala Ala Pro Pro Thr Thr Ser Asn Arg His Arg Arg Gln Ile 3935 3940 3945 | 12279 |
| GAC CGG GGT GTC ACC CAC CTC AAT ATT TCA GGG CTG AAG ATG CCG AGG Asp Arg Gly Val Thr His Leu Asn Ile Ser Gly Leu Lys Met Pro Arg 3950 3955 3960 | 12327 |
| GGT ATC GCT ATC GAC TGG GTG GCC GGG AAT GTG TAC TGG ACC GAT TCC Gly Ile Ala Ile Asp Trp Val Ala Gly Asn Val Tyr Trp Thr Asp Ser 3965 3970 3975 | 12375 |
| GGC CGA GAC GTG ATT GAG GTG GCG CAA ATG AAG GGC GAG AAC CGC AAG Gly Arg Asp Val Ile Glu Val Ala Gln Met Lys Gly Glu Asn Arg Lys 3980 3985 3990 | 12423 |
| ACG CTC ATC TCG GGC ATG ATT GAT GAG CCC CAT GCC ATC GTG GTG GAC Thr Leu Ile Ser Gly Met Ile Asp Glu Pro His Ala Ile Val Val Asp 3995 4000 4005 4010 | 12471 |

FIG.6A-23

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| | |
|---|-------|
| CCT CTG AGG GGC ACC ATG TAC TGG TCA GAC TGG GGG AAC CAC CCC AAG | 12519 |
| Pro Leu Arg Gly Thr Met Tyr Trp Ser Asp Trp Gly Asn His Pro Lys | |
| 4015 4020 4025 | |
| ATT GAA ACA GCA GCG ATG GAT GGC ACC CTT CGG GAG ACT CTC GTG CAA | 12567 |
| Ile Glu Thr Ala Ala Met Asp Gly Thr Leu Arg Glu Thr Leu Val Gln | |
| 4030 4035 4040 | |
| GAC AAC ATT CAG TGG CCT ACA GGG CTG GCT GTG GAC TAT CAC AAT GAA | 12615 |
| Asp Asn Ile Gln Trp Pro Thr Gly Leu Ala Val Asp Tyr His Asn Glu | |
| 4045 4050 4055 | |
| CGG CTC TAC TGG GCA GAT GCC AAG CTT TCG GTC ATC GGC AGC ATC CGG | 12663 |
| Arg Leu Tyr Trp Ala Asp Ala Lys Leu Ser Val Ile Gly Ser Ile Arg | |
| 4060 4065 4070 | |
| CTC AAC GGC ACT GAC CCC ATT GTG GCT GCT GAC AGC AAA CGA GGC CTA | 12711 |
| Leu Asn Gly Thr Asp Pro Ile Val Ala Ala Asp Ser Lys Arg Gly Leu | |
| 4075 4080 4085 4090 | |
| AGT CAC CCC TTC AGC ATC GAT GTG TTT GAA GAC TAC ATC TAC GGA GTC | 12759 |
| Ser His Pro Phe Ser Ile Asp Val Phe Glu Asp Tyr Ile Tyr Gly Val | |
| 4095 4100 4105 | |
| ACT TAC ATC AAT AAT CGT GTC TTC AAG ATC CAC AAG TTT GGA CAC AGC | 12807 |
| Thr Tyr Ile Asn Asn Arg Val Phe Lys Ile His Lys Phe Gly His Ser | |
| 4110 4115 4120 | |
| CCC TTG TAC AAC CTA ACT GGG GGC CTG AGC CAT GCC TCT GAT GTA GTC | 12855 |
| Pro Leu Tyr Asn Leu Thr Gly Gly Leu Ser His Ala Ser Asp Val Val | |
| 4125 4130 4135 | |
| CTT TAC CAT CAA CAC AAG CAG CCT GAA GTG ACC AAC CCC TGT GAC CGC | 12903 |
| Leu Tyr His Gln His Lys Gln Pro Glu Val Thr Asn Pro Cys Asp Arg | |
| 4140 4145 4150 | |
| AAG AAA TGC GAA TGG CTG TGT CTG CTG AGC CCC AGC GGG CCT GTC TGC | 12951 |
| Lys Lys Cys Glu Trp Leu Cys Leu Leu Ser Pro Ser Gly Pro Val Cys | |
| 4155 4160 4165 4170 | |
| ACC TGT CCC AAT GGA AAG AGG CTG GAT AAT GGC ACC TGT GTG CCT GTG | 12999 |
| Thr Cys Pro Asn Gly Lys Arg Leu Asp Asn Gly Thr Cys Val Pro Val | |
| 4175 4180 4185 | |

FIG.6A-24

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| | |
|---|-------|
| CCC TCT CCA ACA CCC CCT CCA GAT GCC CCT AGG CCT GGA ACC TGC ACT Pro Ser Pro Thr Pro Pro Pro Asp Ala Pro Arg Pro Gly Thr Cys Thr 4190 4195 4200 | 13047 |
| CTG CAG TGC TTC AAT GGT GGT AGT TGT TTC CTC AAC GCT CGG AGG CAG Leu Gln Cys Phe Asn Gly Gly Ser Cys Phe Leu Asn Ala Arg Arg Gln 4205 4210 4215 | 13095 |
| CCC AAG TGC CGT TGC CAG CCC CGT TAC ACA GGC GAT AAG TGT GAG CTG Pro Lys Cys Arg Cys Gln Pro Arg Tyr Thr Gly Asp Lys Cys Glu Leu 4220 4225 4230 | 13143 |
| GAT CAG TGC TGG GAA TAC TGT CAC AAC GGA GGC ACC TGT GCG GCT TCC Asp Gln Cys Trp Glu Tyr Cys His Asn Gly Gly Thr Cys Ala Ala Ser 4235 4240 4245 4250 | 13191 |
| CCA TCT GGC ATG CCC ACG TGC CGC TGT CCC ACT GGC TTC ACG GGC CCC Pro Ser Gly Met Pro Thr Cys Arg Cys Pro Thr Gly Phe Thr Gly Pro 4255 4260 4265 | 13239 |
| AAA TGC ACC GCA CAG GTG TGT GCA GGC TAC TGC TCT AAC AAC AGC ACC Lys Cys Thr Ala Gln Val Cys Ala Gly Tyr Cys Ser Asn Asn Ser Thr 4270 4275 4280 | 13287 |
| TGC ACC GTC AAC CAG GGC AAC CAG CCC CAG TGC CGA TGT CTA CCT GGC Cys Thr Val Asn Gln Gly Asn Gln Pro Gln Cys Arg Cys Leu Pro Gly 4285 4290 4295 | 13335 |
| TTC CTG GGC GAC CGT TGC CAG TAC CGG CAG TGC TCT GGC TTC TGT GAG Phe Leu Gly Asp Arg Cys Gln Tyr Arg Gln Cys Ser Gly Phe Cys Glu 4300 4305 4310 | 13383 |
| AAC TTT GGC ACC TGT CAG ATG GCT GCT GAT GGC TCC CGA CAA TGT CGC Asn Phe Gly Thr Cys Gln Met Ala Ala Asp Gly Ser Arg Gln Cys Arg 4315 4320 4325 4330 | 13431 |
| TGC ACC GTC TAC TTT GAG GGA CCA AGG TGT GAG GTG AAC AAG TGT AGT Cys Thr Val Tyr Phe Glu Gly Pro Arg Cys Glu Val Asn Lys Cys Ser 4335 4340 4345 | 13479 |
| CGC TGT CTC CAA GGC GCC TGT GTG GTC AAT AAG CAG ACC GGA GAT GTC Arg Cys Leu Gln Gly Ala Cys Val Val Asn Lys Gln Thr Gly Asp Val 4350 4355 4360 | 13527 |

FIG.6A-25

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| | |
|---|-------|
| ACA TGC AAC TGC ACT GAT GGC CGG GTA GCC CCC AGT TGT CTC ACC TGC Thr Cys Asn Cys Thr Asp Gly Arg Val Ala Pro Ser Cys Leu Thr Cys 4365 4370 4375 | 13575 |
| ATC GAT CAC TGT AGC AAT GGT GGC TCC TGC ACC ATG AAC AGC AAG ATG Ile Asp His Cys Ser Asn Gly Gly Ser Cys Thr Met Asn Ser Lys Met 4380 4385 4390 | 13623 |
| ATG CCT GAG TGC CAG TGC CCG CCC CAT ATG ACA GGA CCC CGG TGC CAG Met Pro Glu Cys Gln Cys Pro Pro His Met Thr Gly Pro Arg Cys Gln 4395 4400 4405 4410 | 13671 |
| GAG CAG GTT GTT AGT CAG CAA CAG CCT GGG CAT ATG GCC TCC ATC CTG Glu Gln Val Val Ser Gln Gln Gln Pro Gly His Met Ala Ser Ile Leu 4415 4420 4425 | 13719 |
| ATC CCT CTG CTG CTG CTT CTC CTG CTG CTT CTG GTG GCT GGC GTG GTG Ile Pro Leu Leu Leu Leu Leu Leu Leu Leu Val Ala Gly Val Val 4430 4435 4440 | 13767 |
| TTC TGG TAT AAG CGG CGA GTC CGA GGG GCT AAG GGC TTC CAG CAC CAG Phe Trp Tyr Lys Arg Arg Val Arg Gly Ala Lys Gly Phe Gln His Gln 4445 4450 4455 | 13815 |
| CGG ATG ACC AAT GGG GCC ATG AAT GTG GAA ATT GGA AAC CCT ACC TAC Arg Met Thr Asn Gly Ala Met Asn Val Glu Ile Gly Asn Pro Thr Tyr 4460 4465 4470 | 13863 |
| AAG ATG TAT GAA GGT GGA GAG CCC GAT GAT GTC GGG GGC CTA CTG GAT Lys Met Tyr Glu Gly Gly Glu Pro Asp Asp Val Gly Gly Leu Leu Asp 4475 4480 4485 4490 | 13911 |
| GCT GAT TTT GCC CTT GAC CCT GAC AAG CCT ACC AAC TTC ACC AAC CCA Ala Asp Phe Ala Leu Asp Pro Asp Lys Pro Thr Asn Phe Thr Asn Pro 4495 4500 4505 | 13959 |
| GTG TAT GCC ACG CTC TAC ATG GGG GGC CAC GGC AGC CGC CAT TCC CTG Val Tyr Ala Thr Leu Tyr Met Gly Gly His Gly Ser Arg His Ser Leu 4510 4515 4520 | 14007 |
| GCC AGC ACG GAC GAG AAG CGA GAA CTG CTG GGC CGG GGA CCT GAA GAC Ala Ser Thr Asp Glu Lys Arg Glu Leu Leu Gly Arg Gly Pro Glu Asp 4525 4530 4535 | 14055 |

FIG.6A-26

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GAG ATA GGA GAT CCC TTG GCA TAGGGCCCTG CCCCACGGA TGTCCCCAGA AAGC 14110
CCCCTGCCAC ATGAGTCTTT CAATGAACCC CCTCCCCAGC CGGCCCTTCT CCGGCCCTGC 14170

Glu Ile Gly Asp Pro Leu Ala
4540 4545

CGGGTGTACA AATGTAAAAA TGAAGGAATT ACTTTTTATA TGTGAGCGAG CAAGCGAGCA 14230

AGCACAGTAT TATCTCTTTG CATTTCCTTC CTGCCTGCTC CTCAGTATCC CCCCATGCT 14290
GCCTTGAGGG GCGGGGAGG GCTTTGTGGC TCAAAGGTAT GAAGGAGTCC ACATGTTCCC 14350
TACCGAGCAT ACCCCTGGAA GCCTGGCGGC ACGGCCTCCC CACCACGCCT GTGCAAGACA 14410
CTCAACGGGG CTCCGTGTCC CAGCTTTCCT TTCCTTGGCT CTCTGGGGTT AGTTCAGGGG 14470
AGGTGGAGTC CTCTGCTGAC CCTGTCTGGA AGATTTGGCT CTAGCTGAGG AAGGAGTCTT 14530
TTAGTTGAGG GAAGTCACCC CAAACCCAG CTCCCACTTT CAGGGGCACC TCTCAGATGG 14590
CCATGCTCAG TATCCCTTCC AGACAGGCCC TCCCCTCTCT AGCGCCCCCT CTGTGGCTCC 14650
TAGGGCTGAA CACATTCTTT GGTAAGTGTC CCCCAGCCT CCCATCCCCC TGAGGGCCAG 14710
GAAGAGTCGG GGCACACCAA GGAAGGGCAA GCGGGCAGCC CCATTTTGGG GACGTGAACG 14770
TTTAAATAAT TTTTGCTGAA TTCCTTTACA ACTAAATAAC ACAGATATTG TTATAAATAA 14830
AATTGTAAAA AAAAAAAAAA

FIG.6A-27

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| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Leu | Thr | Pro | Pro | Leu | Leu | Leu | Leu | Val | Pro | Leu | Leu | Ser | Ala | Leu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Val | Ser | Gly | Ala | Thr | Met | Asp | Ala | Pro | Lys | Thr | Cys | Ser | Pro | Lys | Gln |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Phe | Ala | Cys | Arg | Asp | Gln | Ile | Thr | Cys | Ile | Ser | Lys | Gly | Trp | Arg | Cys |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Asp | Gly | Glu | Arg | Asp | Cys | Pro | Asp | Gly | Ser | Asp | Glu | Ala | Pro | Glu | Ile |
| | 50 | | | | | 55 | | | | 60 | | | | | |
| Cys | Pro | Gln | Ser | Lys | Ala | Gln | Arg | Cys | Pro | Pro | Asn | Glu | His | Ser | Cys |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Leu | Gly | Thr | Glu | Leu | Cys | Val | Pro | Met | Ser | Arg | Leu | Cys | Asn | Gly | Ile |
| | | | | 85 | | | | 90 | | | | | | 95 | |
| Gln | Asp | Cys | Met | Asp | Gly | Ser | Asp | Glu | Gly | Ala | His | Cys | Arg | Glu | Leu |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Arg | Ala | Asn | Cys | Ser | Arg | Met | Gly | Cys | Gln | His | His | Cys | Val | Pro | Thr |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Pro | Ser | Gly | Pro | Thr | Cys | Tyr | Cys | Asn | Ser | Ser | Phe | Gln | Leu | Glu | Ala |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Asp | Gly | Lys | Thr | Cys | Lys | Asp | Phe | Asp | Glu | Cys | Ser | Val | Tyr | Gly | Thr |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Cys | Ser | Gln | Leu | Cys | Thr | Asn | Thr | Asp | Gly | Ser | Phe | Thr | Cys | Gly | Cys |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Val | Glu | Gly | Tyr | Leu | Leu | Gln | Pro | Asp | Asn | Arg | Ser | Cys | Lys | Ala | Lys |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Asn | Glu | Pro | Val | Asp | Arg | Pro | Pro | Val | Leu | Leu | Ile | Ala | Asn | Ser | Gln |
| | 195 | | | | | | 200 | | | | | 205 | | | |
| Asn | Ile | Leu | Ala | Thr | Tyr | Leu | Ser | Gly | Ala | Gln | Val | Ser | Thr | Ile | Thr |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Pro | Thr | Ser | Thr | Arg | Gln | Thr | Thr | Ala | Met | Asp | Phe | Ser | Tyr | Ala | Asn |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Glu | Thr | Val | Cys | Trp | Val | His | Val | Gly | Asp | Ser | Ala | Ala | Gln | Thr | Gln |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Leu | Lys | Cys | Ala | Arg | Met | Pro | Gly | Leu | Lys | Gly | Phe | Val | Asp | Glu | His |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Thr | Ile | Asn | Ile | Ser | Leu | Ser | Leu | His | His | Val | Glu | Gln | Met | Ala | Ile |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Asp | Trp | Leu | Thr | Gly | Asn | Phe | Tyr | Phe | Val | Asp | Asp | Ile | Asp | Asp | Arg |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Ile | Phe | Val | Cys | Asn | Arg | Asn | Gly | Asp | Thr | Cys | Val | Thr | Leu | Leu | Asp |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |

FIG.6B-1

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Leu Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly
 325 330 335
 Lys Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys
 340 345 350
 Asp Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val
 355 360 365
 Phe Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp
 370 375 380
 Ala Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys
 385 390 395 400
 Gly Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly
 405 410 415
 Leu Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala
 420 425 430
 Asn Thr Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser
 435 440 445
 Thr Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His
 450 455 460
 Ile Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu
 465 470 475 480
 Asn Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu
 485 490 495
 Ala Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser
 500 505 510
 Leu Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe
 515 520 525
 Leu Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met
 530 535 540
 Gly Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met
 545 550 555 560
 Asn Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe
 565 570 575
 Ala Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr
 580 585 590
 Glu Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val
 595 600 605
 Ala Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro
 610 615 620
 Lys Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg
 625 630 635 640
 Lys Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val
 645 650 655

FIG.6B-2

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| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Pro | Leu | Asn | Gly | Trp | Met | Tyr | Trp | Thr | Asp | Trp | Glu | Glu | Asp | Pro |
| | | | 660 | | | | | 665 | | | | | 670 | | |
| Lys | Asp | Ser | Arg | Arg | Gly | Arg | Leu | Glu | Arg | Ala | Trp | Met | Asp | Gly | Ser |
| | | 675 | | | | | 680 | | | | | 685 | | | |
| His | Arg | Asp | Ile | Phe | Val | Thr | Ser | Lys | Thr | Val | Leu | Trp | Pro | Asn | Gly |
| | | 690 | | | | 695 | | | | | 700 | | | | |
| Leu | Ser | Leu | Asp | Ile | Pro | Ala | Gly | Arg | Leu | Tyr | Trp | Val | Asp | Ala | Phe |
| 705 | | | | | 710 | | | | | 715 | | | | | 720 |
| Tyr | Asp | Arg | Ile | Glu | Thr | Ile | Leu | Leu | Asn | Gly | Thr | Asp | Arg | Lys | Ile |
| | | | 725 | | | | | | 730 | | | | | 735 | |
| Val | Tyr | Glu | Gly | Pro | Glu | Leu | Asn | His | Ala | Phe | Gly | Leu | Cys | His | His |
| | | | 740 | | | | | 745 | | | | | 750 | | |
| Gly | Asn | Tyr | Leu | Phe | Trp | Thr | Glu | Tyr | Arg | Ser | Gly | Ser | Val | Tyr | Arg |
| | | 755 | | | | | 760 | | | | | 765 | | | |
| Leu | Glu | Arg | Gly | Val | Ala | Gly | Ala | Pro | Pro | Thr | Val | Thr | Leu | Leu | Arg |
| | | 770 | | | | 775 | | | | | | 780 | | | |
| Ser | Glu | Arg | Pro | Pro | Ile | Phe | Glu | Ile | Arg | Met | Tyr | Asp | Ala | His | Glu |
| 785 | | | | | 790 | | | | | 795 | | | | | 800 |
| Gln | Gln | Val | Gly | Thr | Asn | Lys | Cys | Arg | Val | Asn | Asn | Gly | Gly | Cys | Ser |
| | | | 805 | | | | | 810 | | | | | 815 | | |
| Ser | Leu | Cys | Leu | Ala | Thr | Pro | Gly | Ser | Arg | Gln | Cys | Ala | Cys | Ala | Glu |
| | | | 820 | | | | | 825 | | | | | 830 | | |
| Asp | Gln | Val | Leu | Asp | Thr | Asp | Gly | Val | Thr | Cys | Leu | Ala | Asn | Pro | Ser |
| | | 835 | | | | | 840 | | | | | 845 | | | |
| Tyr | Val | Pro | Pro | Pro | Gln | Cys | Gln | Pro | Gly | Gln | Phe | Ala | Cys | Ala | Asn |
| | | 850 | | | | 855 | | | | | 860 | | | | |
| Asn | Arg | Cys | Ile | Gln | Glu | Arg | Trp | Lys | Cys | Asp | Gly | Asp | Asn | Asp | Cys |
| 865 | | | | | 870 | | | | | 875 | | | | | 880 |
| Leu | Asp | Asn | Ser | Asp | Glu | Ala | Pro | Ala | Leu | Cys | His | Gln | His | Thr | Cys |
| | | | 885 | | | | | | 890 | | | | | 895 | |
| Pro | Ser | Asp | Arg | Phe | Lys | Cys | Glu | Asn | Asn | Arg | Cys | Ile | Pro | Asn | Arg |
| | | | 900 | | | | | 905 | | | | | 910 | | |
| Trp | Leu | Cys | Asp | Gly | Asp | Asn | Asp | Cys | Gly | Asn | Ser | Glu | Asp | Glu | Ser |
| | | 915 | | | | | 920 | | | | | | 925 | | |
| Asn | Ala | Thr | Cys | Ser | Ala | Arg | Thr | Cys | Pro | Pro | Asn | Gln | Phe | Ser | Cys |
| | | 930 | | | | 935 | | | | | | 940 | | | |
| Ala | Ser | Gly | Arg | Cys | Ile | Pro | Ile | Ser | Trp | Thr | Cys | Asp | Leu | Asp | Asp |
| 945 | | | | | 950 | | | | | 955 | | | | | 960 |
| Asp | Cys | Gly | Asp | Arg | Ser | Asp | Glu | Ser | Ala | Ser | Cys | Ala | Tyr | Pro | Thr |
| | | | 965 | | | | | | 970 | | | | | 975 | |
| Cys | Phe | Pro | Leu | Thr | Gln | Phe | Thr | Cys | Asn | Asn | Gly | Arg | Cys | Ile | Asn |
| | | | 980 | | | | | 985 | | | | | | 990 | |

FIG.6B-3

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| | | | | | | | | | | | | | | | |
|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|
| Ile | Asn | Trp | Arg | Cys | Asp | Asn | Asp | Asn | Asp | Cys | Gly | Asp | Asn | Ser | Asp |
| | 995 | | | | | | 1000 | | | | | | 1005 | | |
| Glu | Ala | Gly | Cys | Ser | His | Ser | Cys | Ser | Ser | Thr | Gln | Phe | Lys | Cys | Asn |
| | 1010 | | | | | | 1015 | | | | | 1020 | | | |
| Ser | Gly | Arg | Cys | Ile | Pro | Glu | His | Trp | Thr | Cys | Asp | Gly | Asp | Asn | Asp |
| 025 | | | | | 1030 | | | | | 1035 | | | | 1040 | |
| Cys | Gly | Asp | Tyr | Ser | Asp | Glu | Thr | His | Ala | Asn | Cys | Thr | Asn | Gln | Ala |
| | | | 1045 | | | | | | 1050 | | | | | 1055 | |
| Thr | Arg | Pro | Pro | Gly | Gly | Cys | His | Ser | Asp | Glu | Phe | Gln | Cys | Pro | Leu |
| | | 1060 | | | | | | 1065 | | | | | 1070 | | |
| Asp | Gly | Leu | Cys | Ile | Pro | Leu | Arg | Trp | Arg | Cys | Asp | Gly | Asp | Thr | Asp |
| | 1075 | | | | | | 1080 | | | | | 1085 | | | |
| Cys | Met | Asp | Ser | Ser | Asp | Glu | Lys | Ser | Cys | Glu | Gly | Val | Thr | His | Val |
| | 1090 | | | | | | 1095 | | | | 1100 | | | | |
| Cys | Asp | Pro | Asn | Val | Lys | Phe | Gly | Cys | Lys | Asp | Ser | Ala | Arg | Cys | Ile |
| 105 | | | | 1110 | | | | | | 1115 | | | | 1120 | |
| Ser | Lys | Ala | Trp | Val | Cys | Asp | Gly | Asp | Ser | Asp | Cys | Glu | Asp | Asn | Ser |
| | | | 1125 | | | | | | 1130 | | | | | 1135 | |
| Asp | Glu | Glu | Asn | Cys | Glu | Ala | Leu | Ala | Cys | Arg | Pro | Pro | Ser | His | Pro |
| | | 1140 | | | | | | 1145 | | | | | 1150 | | |
| Cys | Ala | Asn | Asn | Thr | Ser | Val | Cys | Leu | Pro | Pro | Asp | Lys | Leu | Cys | Asp |
| | 1155 | | | | | | 1160 | | | | | 1165 | | | |
| Gly | Lys | Asp | Asp | Cys | Gly | Asp | Gly | Ser | Asp | Glu | Gly | Glu | Leu | Cys | Asp |
| | 1170 | | | | | 1175 | | | | | 1180 | | | | |
| Gln | Cys | Ser | Leu | Asn | Asn | Gly | Gly | Cys | Ser | His | Asn | Cys | Ser | Val | Ala |
| 185 | | | | 1190 | | | | | | 1195 | | | | 1200 | |
| Pro | Gly | Glu | Gly | Ile | Val | Cys | Ser | Cys | Pro | Leu | Gly | Met | Glu | Leu | Gly |
| | | | 1205 | | | | | | 1210 | | | | 1215 | | |
| Ser | Asp | Asn | His | Thr | Cys | Gln | Ile | Gln | Ser | Tyr | Cys | Ala | Lys | His | Leu |
| | | 1220 | | | | | 1225 | | | | | | 1230 | | |
| Lys | Cys | Ser | Gln | Lys | Cys | Asp | Gln | Asn | Lys | Phe | Ser | Val | Lys | Cys | Ser |
| | 1235 | | | | | | 1240 | | | | | 1245 | | | |
| Cys | Tyr | Glu | Gly | Trp | Val | Leu | Glu | Pro | Asp | Gly | Glu | Thr | Cys | Arg | Ser |
| | 1250 | | | | | 1255 | | | | | 1260 | | | | |
| Leu | Asp | Pro | Phe | Lys | Leu | Phe | Ile | Ile | Phe | Ser | Asn | Arg | His | Glu | Ile |
| 265 | | | | 1270 | | | | | 1275 | | | | | 1280 | |
| Arg | Arg | Ile | Asp | Leu | His | Lys | Gly | Asp | Tyr | Ser | Val | Leu | Val | Pro | Gly |
| | | | 1285 | | | | | 1290 | | | | | 1295 | | |
| Leu | Arg | Asn | Thr | Ile | Ala | Leu | Asp | Phe | His | Leu | Ser | Gln | Ser | Ala | Leu |
| | | 1300 | | | | | | 1305 | | | | | 1310 | | |
| Tyr | Trp | Thr | Asp | Ala | Val | Glu | Asp | Lys | Ile | Tyr | Arg | Gly | Lys | Leu | Leu |
| | 1315 | | | | | | 1320 | | | | | | 1325 | | |

FIG.6B-4

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Asp Asn Gly Ala Leu Thr Ser Phe Glu Val Val Ile Gln Tyr Gly Leu
1330 1335 1340
Ala Thr Pro Glu Gly Leu Ala Val Asp Trp Ile Ala Gly Asn Ile Tyr
345 1350 1355 1360
Trp Val Glu Ser Asn Leu Asp Gln Ile Glu Val Ala Lys Leu Asp Gly
1365 1370 1375
Thr Leu Arg Thr Thr Leu Leu Ala Gly Asp Ile Glu His Pro Arg Ala
1380 1385 1390
Ile Ala Leu Asp Pro Arg Asp Gly Ile Leu Phe Trp Thr Asp Trp Asp
1395 1400 1405
Ala Ser Leu Pro Arg Ile Glu Ala Ala Ser Met Ser Gly Ala Gly Arg
1410 1415 1420
Arg Thr Ile His Arg Glu Thr Gly Ser Gly Gly Cys Ala Asn Gly Leu
425 1430 1435 1440
Thr Val Asp Tyr Leu Glu Lys Arg Ile Leu Trp Ile Asp Ala Arg Ser
1445 1450 1455
Asp Ala Ile Tyr Ser Ala Arg Tyr Asp Gly Ser Gly His Met Glu Val
1460 1465 1470
Leu Arg Gly His Glu Phe Leu Ser His Pro Phe Ala Val Thr Leu Tyr
1475 1480 1485
Gly Gly Glu Val Tyr Trp Thr Asp Trp Arg Thr Asn Thr Leu Ala Lys
1490 1495 1500
Ala Asn Lys Trp Thr Gly His Asn Val Thr Val Val Gln Arg Thr Asn
505 1510 1515 1520
Thr Gln Pro Phe Asp Leu Gln Val Tyr His Pro Ser Arg Gln Pro Met
1525 1530 1535
Ala Pro Asn Pro Cys Glu Ala Asn Gly Gly Arg Gly Pro Cys Ser His
1540 1545 1550
Leu Cys Leu Ile Asn Tyr Asn Arg Thr Val Ser Trp Ala Cys Pro His
1555 1560 1565
Leu Met Lys Leu His Lys Asp Asn Thr Thr Cys Tyr Glu Phe Lys Lys
1570 1575 1580
Phe Leu Leu Tyr Ala Arg Gln Met Glu Ile Arg Gly Val Asp Leu Asp
585 1590 1595 1600
Ala Pro Tyr Tyr Asn Tyr Ile Ile Ser Phe Thr Val Pro Asp Ile Asp
1605 1610 1615
Asn Val Thr Val Leu Asp Tyr Asp Ala Arg Glu Gln Arg Val Tyr Trp
1620 1625 1630
Ser Asp Val Arg Thr Gln Ala Ile Lys Arg Ala Phe Ile Asn Gly Thr
1635 1640 1645
Gly Val Glu Thr Val Val Ser Ala Asp Leu Pro Asn Ala His Gly Leu
1650 1655 1660

FIG.6B-5

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| | | | |
|---|------|------|------|
| Ala Val Asp Trp Val Ser Arg Asn Leu Phe Trp Thr Ser Tyr Asp Thr | | | |
| 665 | 1670 | 1675 | 1680 |
| Asn Lys Lys Gln Ile Asn Val Ala Arg Leu Asp Gly Ser Phe Lys Asn | | | |
| | 1685 | 1690 | 1695 |
| Ala Val Val Gln Gly Leu Glu Gln Pro His Gly Leu Val Val His Pro | | | |
| | 1700 | 1705 | 1710 |
| Leu Arg Gly Lys Leu Tyr Trp Thr Asp Gly Asp Asn Ile Ser Met Ala | | | |
| | 1715 | 1720 | 1725 |
| Asn Met Asp Gly Ser Asn His Thr Leu Leu Phe Ser Gly Gln Lys Gly | | | |
| | 1730 | 1735 | 1740 |
| Pro Val Gly Leu Ala Ile Asp Phe Pro Glu Ser Lys Leu Tyr Trp Ile | | | |
| 745 | 1750 | 1755 | 1760 |
| Ser Ser Gly Asn His Thr Ile Asn Arg Cys Asn Leu Asp Gly Ser Glu | | | |
| | 1765 | 1770 | 1775 |
| Leu Glu Val Ile Asp Thr Met Arg Ser Gln Leu Gly Lys Ala Thr Ala | | | |
| | 1780 | 1785 | 1790 |
| Leu Ala Ile Met Gly Asp Lys Leu Trp Trp Ala Asp Gln Val Ser Glu | | | |
| | 1795 | 1800 | 1805 |
| Lys Met Gly Thr Cys Asn Lys Ala Asp Gly Ser Gly Ser Val Val Leu | | | |
| | 1810 | 1815 | 1820 |
| Arg Asn Ser Thr Thr Leu Val Met His Met Lys Val Tyr Asp Glu Ser | | | |
| 825 | 1830 | 1835 | 1840 |
| Ile Gln Leu Glu His Glu Gly Thr Asn Pro Cys Ser Val Asn Asn Gly | | | |
| | 1845 | 1850 | 1855 |
| Asp Cys Ser Gln Leu Cys Leu Pro Thr Ser Glu Thr Thr Arg Ser Cys | | | |
| | 1860 | 1865 | 1870 |
| Met Cys Thr Ala Gly Tyr Ser Leu Arg Ser Gly Gln Gln Ala Cys Glu | | | |
| | 1875 | 1880 | 1885 |
| Gly Val Gly Ser Phe Leu Leu Tyr Ser Val His Glu Gly Ile Arg Gly | | | |
| | 1890 | 1895 | 1900 |
| Ile Pro Leu Asp Pro Asn Asp Lys Ser Asp Ala Leu Val Pro Val Ser | | | |
| 905 | 1910 | 1915 | 1920 |
| Gly Thr Ser Leu Ala Val Gly Ile Asp Phe His Ala Glu Asn Asp Thr | | | |
| | 1925 | 1930 | 1935 |
| Ile Tyr Trp Val Asp Met Gly Leu Ser Thr Ile Ser Arg Ala Lys Arg | | | |
| | 1940 | 1945 | 1950 |
| Asp Gln Thr Trp Arg Glu Asp Val Val Thr Asn Gly Ile Gly Arg Val | | | |
| | 1955 | 1960 | 1965 |
| Glu Gly Ile Ala Val Asp Trp Ile Ala Gly Asn Ile Tyr Trp Thr Asp | | | |
| | 1970 | 1975 | 1980 |
| Gln Gly Phe Asp Val Ile Glu Val Ala Arg Leu Asn Gly Ser Phe Arg | | | |
| 985 | 1990 | 1995 | 2000 |

FIG.6B-6

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Tyr Val Val Ile Ser Gln Gly Leu Asp Lys Pro Arg Ala Ile Thr Val
 2005 2010 2015
 His Pro Glu Lys Gly Tyr Leu Phe Trp Thr Glu Trp Gly His Tyr Pro
 2020 2025 2030
 Arg Ile Glu Arg Ser Arg Leu Asp Gly Thr Glu Arg Val Val Leu Val
 2035 2040 2045
 Asn Val Ser Ile Ser Trp Pro Asn Gly Ile Ser Val Asp Tyr Gln Gly
 2050 2055 2060
 Gly Lys Leu Tyr Trp Cys Asp Ala Arg Met Asp Lys Ile Glu Arg Ile
 065 2070 2075 2080
 Asp Leu Glu Thr Gly Glu Asn Arg Glu Val Val Leu Ser Ser Asn Asn
 2085 2090 2095
 Met Asp Met Phe Ser Val Ser Val Phe Glu Asp Phe Ile Tyr Trp Ser
 2100 2105 2110
 Asp Arg Thr His Ala Asn Gly Ser Ile Lys Arg Gly Cys Lys Asp Asn
 2115 2120 2125
 Ala Thr Asp Ser Val Pro Leu Arg Thr Gly Ile Gly Val Gln Leu Lys
 2130 2135 2140
 Asp Ile Lys Val Phe Asn Arg Asp Arg Gln Lys Gly Thr Asn Val Cys
 145 2150 2155 2160
 Ala Val Ala Asn Gly Gly Cys Gln Gln Leu Cys Leu Tyr Arg Gly Gly
 2165 2170 2175
 Gly Gln Arg Ala Cys Ala Cys Ala His Gly Met Leu Ala Glu Asp Gly
 2180 2185 2190
 Ala Ser Cys Arg Glu Tyr Ala Gly Tyr Leu Leu Tyr Ser Glu Arg Thr
 2195 2200 2205
 Ile Leu Lys Ser Ile His Leu Ser Asp Glu Arg Asn Leu Asn Ala Pro
 2210 2215 2220
 Val Gln Pro Phe Glu Asp Pro Glu His Met Lys Asn Val Ile Ala Leu
 225 2230 2235 2240
 Ala Phe Asp Tyr Arg Ala Gly Thr Ser Pro Gly Thr Pro Asn Arg Ile
 2245 2250 2255
 Phe Phe Ser Asp Ile His Phe Gly Asn Ile Gln Gln Ile Asn Asp Asp
 2260 2265 2270
 Gly Ser Gly Arg Thr Thr Ile Val Glu Asn Val Gly Ser Val Glu Gly
 2275 2280 2285
 Leu Ala Tyr His Arg Gly Trp Asp Thr Leu Tyr Trp Thr Ser Tyr Thr
 2290 2295 2300
 Thr Ser Thr Ile Thr Arg His Thr Val Asp Gln Thr Arg Pro Gly Ala
 305 2310 2315 2320
 Phe Glu Arg Glu Thr Val Ile Thr Met Ser Gly Asp Asp His Pro Arg
 2325 2330 2335

FIG.6B-7

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| | | |
|---|------|------|
| Ala Phe Val Leu Asp Glu Cys Gln Asn Leu Met Phe Trp Thr Asn Trp | | |
| 2340 | 2345 | 2350 |
| Asn Glu Leu His Pro Ser Ile Met Arg Ala Ala Leu Ser Gly Ala Asn | | |
| 2355 | 2360 | 2365 |
| Val Leu Thr Leu Ile Glu Lys Asp Ile Arg Thr Pro Asn Gly Leu Ala | | |
| 2370 | 2375 | 2380 |
| Ile Asp His Arg Ala Glu Lys Leu Tyr Phe Ser Asp Ala Thr Leu Asp | | |
| 385 | 2390 | 2395 |
| Lys Ile Glu Arg Cys Glu Tyr Asp Gly Ser His Arg Tyr Val Ile Leu | | |
| 2405 | 2410 | 2415 |
| Lys Ser Glu Pro Val His Pro Phe Gly Leu Ala Val Tyr Gly Glu His | | |
| 2420 | 2425 | 2430 |
| Ile Phe Trp Thr Asp Trp Val Arg Arg Ala Val Gln Arg Ala Asn Lys | | |
| 2435 | 2440 | 2445 |
| Tyr Val Gly Ser Asp Met Lys Leu Leu Arg Val Asp Ile Pro Gln Gln | | |
| 2450 | 2455 | 2460 |
| Pro Met Gly Ile Ile Ala Val Ala Asn Asp Thr Asn Ser Cys Glu Leu | | |
| 465 | 2470 | 2475 |
| Ser Pro Cys Arg Ile Asn Asn Gly Gly Cys Gln Asp Leu Cys Leu Leu | | |
| 2485 | 2490 | 2495 |
| Thr His Gln Gly His Val Asn Cys Ser Cys Arg Gly Gly Arg Ile Leu | | |
| 2500 | 2505 | 2510 |
| Gln Glu Asp Phe Thr Cys Arg Ala Val Asn Ser Ser Cys Arg Ala Gln | | |
| 2515 | 2520 | 2525 |
| Asp Glu Phe Glu Cys Ala Asn Gly Glu Cys Ile Ser Phe Ser Leu Thr | | |
| 2530 | 2535 | 2540 |
| Cys Asp Gly Val Ser His Cys Lys Asp Lys Ser Asp Glu Lys Pro Ser | | |
| 545 | 2550 | 2555 |
| Tyr Cys Asn Ser Arg Arg Cys Lys Lys Thr Phe Arg Gln Cys Asn Asn | | |
| 2565 | 2570 | 2575 |
| Gly Arg Cys Val Ser Asn Met Leu Trp Cys Asn Gly Val Asp Tyr Cys | | |
| 2580 | 2585 | 2590 |
| Gly Asp Gly Ser Asp Glu Ile Pro Cys Asn Lys Thr Ala Cys Gly Val | | |
| 2595 | 2600 | 2605 |
| Gly Glu Phe Arg Cys Arg Asp Gly Ser Cys Ile Gly Asn Ser Ser Arg | | |
| 2610 | 2615 | 2620 |
| Cys Asn Gln Phe Val Asp Cys Glu Asp Ala Ser Asp Glu Met Asn Cys | | |
| 625 | 2630 | 2635 |
| Ser Ala Thr Asp Cys Ser Ser Tyr Phe Arg Leu Gly Val Lys Gly Val | | |
| 2645 | 2650 | 2655 |
| Leu Phe Gln Pro Cys Glu Arg Thr Ser Leu Cys Tyr Ala Pro Ser Trp | | |
| 2660 | 2665 | 2670 |

FIG.6B-8

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Val Cys Asp Gly Ala Asn Asp Cys Gly Asp Tyr Ser Asp Glu Arg Asp
2675 2680 2685
Cys Pro Gly Val Lys Arg Pro Arg Cys Pro Leu Asn Tyr Phe Ala Cys
2690 2695 2700
Pro Ser Gly Arg Cys Ile Pro Met Ser Trp Thr Cys Asp Lys Glu Asp
705 2710 2715 2720
Asp Cys Glu Asn Gly Glu Asp Glu Thr His Cys Asn Lys Phe Cys Ser
2725 2730 2735
Glu Ala Gln Phe Glu Cys Gln Asn His Arg Cys Ile Ser Lys Gln Trp
2740 2745 2750
Leu Cys Asp Gly Ser Asp Asp Cys Gly Asp Gly Ser Asp Glu Ala Ala
2755 2760 2765
His Cys Glu Gly Lys Thr Cys Gly Pro Ser Ser Phe Ser Cys Pro Gly
2770 2775 2780
Thr His Val Cys Val Pro Glu Arg Trp Leu Cys Asp Gly Asp Lys Asp
785 2790 2795 2800
Cys Thr Asp Gly Ala Asp Glu Ser Val Thr Ala Gly Cys Leu Tyr Asn
2805 2810 2815
Ser Thr Cys Asp Asp Arg Glu Phe Met Cys Gln Asn Arg Leu Cys Ile
2820 2825 2830
Pro Lys His Phe Val Cys Asp His Asp Arg Asp Cys Ala Asp Gly Ser
2835 2840 2845
Asp Glu Ser Pro Glu Cys Glu Tyr Pro Thr Cys Gly Pro Asn Glu Phe
2850 2855 2860
Arg Cys Ala Asn Gly Arg Cys Leu Ser Ser Arg Gln Trp Glu Cys Asp
865 2870 2875 2880
Gly Glu Asn Asp Cys His Asp His Ser Asp Glu Ala Pro Lys Asn Pro
2885 2890 2895
His Cys Thr Ser Pro Glu His Lys Cys Asn Ala Ser Ser Gln Phe Leu
2900 2905 2910
Cys Ser Ser Gly Arg Cys Val Ala Glu Ala Leu Leu Cys Asn Gly Gln
2915 2920 2925
Asp Asp Cys Gly Asp Gly Ser Asp Glu Arg Gly Cys His Val Asn Glu
2930 2935 2940
Cys Leu Ser Arg Lys Leu Ser Gly Cys Ser Gln Asp Cys Glu Asp Leu
945 2950 2955 2960
Lys Ile Gly Phe Lys Cys Arg Cys Arg Pro Gly Phe Arg Leu Lys Asp
2965 2970 2975
Asp Gly Arg Thr Cys Ala Asp Leu Asp Glu Cys Ser Thr Thr Phe Pro
2980 2985 2990
Cys Ser Gln Leu Cys Ile Asn Thr His Gly Ser Tyr Lys Cys Leu Cys
2995 3000 3005

FIG.6B-9

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Val Glu Gly Tyr Ala Pro Arg Gly Gly Asp Pro His Ser Cys Lys Ala
 3010 3015 3020
 Val Thr Asp Glu Glu Pro Phe Leu Ile Phe Ala Asn Arg Tyr Tyr Leu
 025 3030 3035 3040
 Arg Lys Leu Asn Leu Asp Gly Ser Asn Tyr Thr Leu Leu Lys Gln Gly
 3045 3050 3055
 Leu Asn Asn Ala Val Ala Leu Ala Phe Asp Tyr Arg Glu Gln Met Ile
 3060 3065 3070
 Tyr Trp Thr Gly Val Thr Thr Gln Gly Ser Met Ile Arg Arg Met His
 3075 3080 3085
 Leu Asn Gly Ser Asn Val Gln Val Leu His Arg Thr Gly Leu Ser Asn
 3090 3095 3100
 Pro Asp Gly Leu Ala Val Asp Trp Val Gly Gly Asn Leu Tyr Trp Cys
 105 3110 3115 3120
 Asp Lys Gly Arg Asp Thr Ile Glu Val Ser Lys Leu Asn Gly Ala Tyr
 3125 3130 3135
 Arg Thr Val Leu Val Ser Ser Gly Leu Arg Glu Pro Arg Ala Leu Val
 3140 3145 3150
 Val Asp Val Gln Asn Gly Tyr Leu Tyr Trp Thr Asp Trp Gly Asp His
 3155 3160 3165
 Ser Leu Ile Gly Arg Ile Gly Met Asp Gly Ser Gly Arg Ser Ile Ile
 3170 3175 3180
 Val Asp Thr Lys Ile Thr Trp Pro Asn Gly Leu Thr Val Asp Tyr Val
 185 3190 3195 3200
 Thr Glu Arg Ile Tyr Trp Ala Asp Ala Arg Glu Asp Tyr Ile Glu Phe
 3205 3210 3215
 Ala Ser Leu Asp Gly Ser Asn Arg His Val Val Leu Ser Gln Asp Ile
 3220 3225 3230
 Pro His Ile Phe Ala Leu Thr Leu Phe Glu Asp Tyr Val Tyr Trp Thr
 3235 3240 3245
 Asp Trp Glu Thr Lys Ser Ile Asn Arg Ala His Lys Thr Thr Gly Ala
 3250 3255 3260
 Asn Lys Thr Leu Leu Ile Ser Thr Leu His Arg Pro Met Asp Leu His
 265 3270 3275 3280
 Val Phe His Ala Leu Arg Gln Pro Asp Val Pro Asn His Pro Cys Lys
 3285 3290 3295
 Val Asn Asn Gly Gly Cys Ser Asn Leu Cys Leu Leu Ser Pro Gly Gly
 3300 3305 3310
 Gly His Lys Cys Ala Cys Pro Thr Asn Phe Tyr Leu Gly Gly Asp Gly
 3315 3320 3325
 Arg Thr Cys Val Ser Asn Cys Thr Ala Ser Gln Phe Val Cys Lys Asn
 3330 3335 3340

FIG.6B-10

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Asp Lys Cys Ile Pro Phe Trp Trp Lys Cys Asp Thr Glu Asp Asp Cys
 345 3350 3355 3360
 Gly Asp His Ser Asp Glu Pro Pro Asp Cys Pro Glu Phe Lys Cys Arg
 3365 3370 3375
 Pro Gly Gln Phe Gln Cys Ser Thr Gly Ile Cys Thr Asn Pro Ala Phe
 3380 3385 3390
 Ile Cys Asp Gly Asp Asn Asp Cys Gln Asp Asn Ser Asp Glu Ala Asn
 3395 3400 3405
 Cys Asp Ile His Val Cys Leu Pro Ser Gln Phe Lys Cys Thr Asn Thr
 3410 3415 3420
 Asn Arg Cys Ile Pro Gly Ile Phe Arg Cys Asn Gly Gln Asp Asn Cys
 425 3430 3435 3440
 Gly Asp Gly Glu Asp Glu Arg Asp Cys Pro Glu Val Thr Cys Ala Pro
 3445 3450 3455
 Asn Gln Phe Gln Cys Ser Ile Thr Lys Arg Cys Ile Pro Arg Val Trp
 3460 3465 3470
 Val Cys Asp Arg Asp Asn His Cys Val Asp Gly Ser Asp Glu Pro Ala
 3475 3480 3485
 Asn Cys Thr Gln Met Thr Cys Gly Val Asp Glu Phe Arg Cys Lys Asp
 3490 3495 3500
 Ser Gly Arg Cys Ile Pro Ala Arg Trp Lys Cys Asp Gly Glu Asp Asp
 505 3510 3515 3520
 Cys Gly Asp Gly Ser Asp Glu Pro Lys Glu Glu Cys Asp Glu Arg Thr
 3525 3530 3535
 Cys Glu Pro Tyr Gln Phe Arg Cys Lys Asn Asn Arg Cys Val Pro Gly
 3540 3545 3550
 Arg Trp Gln Cys Asp Tyr Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu
 3555 3560 3565
 Glu Ser Cys Thr Pro Arg Pro Cys Ser Glu Ser Glu Phe Phe Cys Ala
 3570 3575 3580
 Asn Gly Arg Cys Ile Ala Gly Arg Trp Lys Cys Asp Gly Asp His Asp
 585 3590 3595 3600
 Cys Ala Asp Gly Ser Asp Glu Lys Asp Cys Thr Pro Arg Cys Asp Met
 3605 3610 3615
 Asp Gln Phe Gln Cys Lys Ser Gly His Cys Ile Pro Leu Arg Trp Pro
 3620 3625 3630
 Cys Asp Ala Asp Ala Asp Cys Met Asp Gly Ser Asp Glu Glu Ala Cys
 3635 3640 3645
 Gly Thr Gly Val Arg Thr Cys Pro Leu Asp Glu Phe Gln Cys Asn Asn
 3650 3655 3660
 Thr Leu Cys Lys Pro Leu Ala Trp Lys Cys Asp Gly Glu Asp Asp Cys
 665 3670 3675 3680

FIG.6B-11

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Gly Asp Asn Ser Asp Glu Asn Pro Glu Glu Cys Ala Arg Phe Ile Cys
 3685 3690 3695
 Pro Pro Asn Arg Pro Phe Arg Cys Lys Asn Asp Arg Val Cys Leu Trp
 3700 3705 3710
 Ile Gly Arg Gln Cys Asp Gly Val Asp Asn Cys Gly Asp Gly Thr Asp
 3715 3720 3725
 Glu Glu Asp Cys Glu Pro Pro Thr Ala Gln Asn Pro His Cys Lys Asp
 3730 3735 3740
 Lys Lys Glu Phe Leu Cys Arg Asn Gln Arg Cys Leu Ser Ser Ser Leu
 745 3750 3755 3760
 Arg Cys Asn Met Phe Asp Asp Cys Gly Asp Gly Ser Asp Glu Glu Asp
 3765 3770 3775
 Cys Ser Ile Asp Pro Lys Leu Thr Ser Cys Ala Thr Asn Ala Ser Met
 3780 3785 3790
 Cys Gly Asp Glu Ala Arg Cys Val Arg Thr Glu Lys Ala Ala Tyr Cys
 3795 3800 3805
 Ala Cys Arg Ser Gly Phe His Thr Val Pro Gly Gln Pro Gly Cys Gln
 3810 3815 3820
 Asp Ile Asn Glu Cys Leu Arg Phe Gly Thr Cys Ser Gln Leu Trp Asn
 825 3830 3835 3840
 Lys Pro Lys Gly Gly His Leu Cys Ser Cys Ala Arg Asn Phe Met Lys
 3845 3850 3855
 Thr His Asn Thr Cys Lys Ala Glu Gly Ser Glu Tyr Gln Val Leu Tyr
 3860 3865 3870
 Ile Ala Asp Asp Asn Glu Ile Arg Ser Leu Phe Pro Gly His Pro His
 3875 3880 3885
 Ser Ala Tyr Glu Gln Thr Phe Gln Gly Asp Glu Ser Val Arg Ile Asp
 3890 3895 3900
 Ala Met Asp Val His Val Lys Ala Gly Arg Val Tyr Trp Thr Asn Trp
 905 3910 3915 3920
 His Thr Gly Thr Ile Ser Tyr Arg Ser Leu Pro Pro Ala Ala Pro Pro
 3925 3930 3935
 Thr Thr Ser Asn Arg His Arg Arg Gln Ile Asp Arg Gly Val Thr His
 3940 3945 3950
 Leu Asn Ile Ser Gly Leu Lys Met Pro Arg Gly Ile Ala Ile Asp Trp
 3955 3960 3965
 Val Ala Gly Asn Val Tyr Trp Thr Asp Ser Gly Arg Asp Val Ile Glu
 3970 3975 3980
 Val Ala Gln Met Lys Gly Glu Asn Arg Lys Thr Leu Ile Ser Gly Met
 985 3990 3995 4000
 Ile Asp Glu Pro His Ala Ile Val Val Asp Pro Leu Arg Gly Thr Met
 4005 4010 4015

FIG.6B-12

50/65

Tyr Trp Ser Asp Trp Gly Asn His Pro Lys Ile Glu Thr Ala Ala Met
 4020 4025 4030
 Asp Gly Thr Leu Arg Glu Thr Leu Val Gln Asp Asn Ile Gln Trp Pro
 4035 4040 4045
 Thr Gly Leu Ala Val Asp Tyr His Asn Glu Arg Leu Tyr Trp Ala Asp
 4050 4055 4060
 Ala Lys Leu Ser Val Ile Gly Ser Ile Arg Leu Asn Gly Thr Asp Pro
 065 4070 4075 4080
 Ile Val Ala Ala Asp Ser Lys Arg Gly Leu Ser His Pro Phe Ser Ile
 4085 4090 4095
 Asp Val Phe Glu Asp Tyr Ile Tyr Gly Val Thr Tyr Ile Asn Asn Arg
 4100 4105 4110
 Val Phe Lys Ile His Lys Phe Gly His Ser Pro Leu Tyr Asn Leu Thr
 4115 4120 4125
 Gly Gly Leu Ser His Ala Ser Asp Val Val Leu Tyr His Gln His Lys
 4130 4135 4140
 Gln Pro Glu Val Thr Asn Pro Cys Asp Arg Lys Lys Cys Glu Trp Leu
 145 4150 4155 4160
 Cys Leu Leu Ser Pro Ser Gly Pro Val Cys Thr Cys Pro Asn Gly Lys
 4165 4170 4175
 Arg Leu Asp Asn Gly Thr Cys Val Pro Val Pro Ser Pro Thr Pro Pro
 4180 4185 4190
 Pro Asp Ala Pro Arg Pro Gly Thr Cys Thr Leu Gln Cys Phe Asn Gly
 4195 4200 4205
 Gly Ser Cys Phe Leu Asn Ala Arg Arg Gln Pro Lys Cys Arg Cys Gln
 4210 4215 4220
 Pro Arg Tyr Thr Gly Asp Lys Cys Glu Leu Asp Gln Cys Trp Glu Tyr
 225 4230 4235 4240
 Cys His Asn Gly Gly Thr Cys Ala Ala Ser Pro Ser Gly Met Pro Thr
 4245 4250 4255
 Cys Arg Cys Pro Thr Gly Phe Thr Gly Pro Lys Cys Thr Ala Gln Val
 4260 4265 4270
 Cys Ala Gly Tyr Cys Ser Asn Asn Ser Thr Cys Thr Val Asn Gln Gly
 4275 4280 4285
 Asn Gln Pro Gln Cys Arg Cys Leu Pro Gly Phe Leu Gly Asp Arg Cys
 4290 4295 4300
 Gln Tyr Arg Gln Cys Ser Gly Phe Cys Glu Asn Phe Gly Thr Cys Gln
 305 4310 4315 4320
 Met Ala Ala Asp Gly Ser Arg Gln Cys Arg Cys Thr Val Tyr Phe Glu
 4325 4330 4335
 Gly Pro Arg Cys Glu Val Asn Lys Cys Ser Arg Cys Leu Gln Gly Ala
 4340 4345 4350

FIG.6B-13

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Cys Val Val Asn Lys Gln Thr Gly Asp Val Thr Cys Asn Cys Thr Asp
 4355 4360 4365
 Gly Arg Val Ala Pro Ser Cys Leu Thr Cys Ile Asp His Cys Ser Asn
 4370 4375 4380
 Gly Gly Ser Cys Thr Met Asn Ser Lys Met Met Pro Glu Cys Gln Cys
 385 4390 4395 4400
 Pro Pro His Met Thr Gly Pro Arg Cys Gln Glu Gln Val Val Ser Gln
 4405 4410 4415
 Gln Gln Pro Gly His Met Ala Ser Ile Leu Ile Pro Leu Leu Leu
 4420 4425 4430
 Leu Leu Leu Leu Leu Val Ala Gly Val Val Phe Trp Tyr Lys Arg Arg
 4435 4440 4445
 Val Arg Gly Ala Lys Gly Phe Gln His Gln Arg Met Thr Asn Gly Ala
 4450 4455 4460
 Met Asn Val Glu Ile Gly Asn Pro Thr Tyr Lys Met Tyr Glu Gly Gly
 465 4470 4475 4480
 Glu Pro Asp Asp Val Gly Gly Leu Leu Asp Ala Asp Phe Ala Leu Asp
 4485 4490 4495
 Pro Asp Lys Pro Thr Asn Phe Thr Asn Pro Val Tyr Ala Thr Leu Tyr
 4500 4505 4510
 Met Gly Gly His Gly Ser Arg His Ser Leu Ala Ser Thr Asp Glu Lys
 4515 4520 4525
 Arg Glu Leu Leu Gly Arg Gly Pro Glu Asp Glu Ile Gly Asp Pro Leu
 4530 4535 4540
 Ala
 545

FIG.6B-14

52/65

| | |
|---|-----|
| GCTACAATCC ATCTGGTCTC CTCCAGCTCC TTCTTTCTGC AAC ATG GGG AAG AAC | 55 |
| Met Gly Lys Asn | |
| 1 | |
| AAA CTC CTT CAT CCA AGT CTG GTT CTT CTC CTC TTG GTC CTC CTG CCC | 103 |
| Lys Leu Leu His Pro Ser Leu Val Leu Leu Leu Val Leu Leu Pro | |
| 5 10 15 20 | |
| ACA GAC GCC TCA GTC TCT GGA AAA CCG CAG TAT ATG GTT CTG GTC CCC | 151 |
| Thr Asp Ala Ser Val Ser Gly Lys Pro Gln Tyr Met Val Leu Val Pro | |
| 25 30 35 | |
| TCC CTG CTC CAC ACT GAG ACC ACT GAG AAG GGC TGT GTC CTT CTG AGC | 199 |
| Ser Leu Leu His Thr Glu Thr Thr Glu Lys Gly Cys Val Leu Leu Ser | |
| 40 45 50 | |
| TAC CTG AAT GAG ACA GTG ACT GTA AGT GCT TCC TTG GAG TCT GTC AGG | 247 |
| Tyr Leu Asn Glu Thr Val Thr Val Ser Ala Ser Leu Glu Ser Val Arg | |
| 55 60 65 | |
| GGA AAC AGG AGC CTC TTC ACT GAC CTG GAG GCG GAG AAT GAC GTA CTC | 295 |
| Gly Asn Arg Ser Leu Phe Thr Asp Leu Glu Ala Glu Asn Asp Val Leu | |
| 70 75 80 | |
| CAC TGT GTC GCC TTC GCT GTC CCA AAG TCT TCA TCC AAT GAG GAG GTA | 343 |
| His Cys Val Ala Phe Ala Val Pro Lys Ser Ser Ser Asn Glu Glu Val | |
| 85 90 95 100 | |
| ATG TTC CTC ACT GTC CAA GTG AAA GGA CCA ACC CAA GAA TTT AAG AAG | 391 |
| Met Phe Leu Thr Val Gln Val Lys Gly Pro Thr Gln Glu Phe Lys Lys | |
| 105 110 115 | |
| CGG ACC ACA GTG ATG GTT AAG AAC GAG GAC AGT CTG GTC TTT GTC CAG | 439 |
| Arg Thr Thr Val Met Val Lys Asn Glu Asp Ser Leu Val Phe Val Gln | |
| 120 125 130 | |
| ACA GAC AAA TCA ATC TAC AAA CCA GGG CAG ACA GTG AAA TTT CGT GTT | 487 |
| Thr Asp Lys Ser Ile Tyr Lys Pro Gly Gln Thr Val Lys Phe Arg Val | |
| 135 140 145 | |
| GTC TCC ATG GAT GAA AAC TTT CAC CCC CTG AAT GAG TTG ATT CCA CTA | 535 |
| Val Ser Met Asp Glu Asn Phe His Pro Leu Asn Glu Leu Ile Pro Leu | |
| 150 155 160 | |

FIG.7A-1

| 53/65 | | | | | | | | | | | | | | | | | |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|-----|-----|-----|-----|-----|------|
| GTA TAC ATT CAG GAT CCC AAA GGA AAT CGC ATC GCA CAA TGG CAG AGT | | | | | | | | | | | | | | | | | 583 |
| Val Tyr Ile Gln Asp Pro Lys Gly Asn Arg Ile Ala Gln Trp Gln Ser | | | | | | | | | | | | | | | | | |
| 165 | | | | | 170 | | | | 175 | | | | | | | 180 | |
| TTC CAG TTA GAG GGT GGC CTC AAG CAA TTT TCT TTT CCC CTC TCA TCA | | | | | | | | | | | | | | | | | 631 |
| Phe Gln Leu Glu Gly Gly Leu Lys Gln Phe Ser Phe Pro Leu Ser Ser | | | | | | | | | | | | | | | | | |
| | | | | 185 | | | | 190 | | | | | | | | 195 | |
| GAG CCC TTC CAG GGC TCC TAC AAG GTG GTG GTA CAG AAG AAA TCA GGT | | | | | | | | | | | | | | | | | 679 |
| Glu Pro Phe Gln Gly Ser Tyr Lys Val Val Val Gln Lys Lys Ser Gly | | | | | | | | | | | | | | | | | |
| | | | 200 | | | | 205 | | | | | | 210 | | | | |
| GGA AGG ACA GAG CAC CCT TTC ACC GTG GAG GAA TTT GTT CTT CCC AAG | | | | | | | | | | | | | | | | | 727 |
| Gly Arg Thr Glu His Pro Phe Thr Val Glu Glu Phe Val Leu Pro Lys | | | | | | | | | | | | | | | | | |
| | | 215 | | | | | 220 | | | | | | 225 | | | | |
| TTT GAA GTA CAA GTA ACA GTG CCA AAG ATA ATC ACC ATC TTG GAA GAA | | | | | | | | | | | | | | | | | 775 |
| Phe Glu Val Gln Val Thr Val Pro Lys Ile Ile Thr Ile Leu Glu Glu | | | | | | | | | | | | | | | | | |
| | 230 | | | | | 235 | | | | | | 240 | | | | | |
| GAG ATG AAT GTA TCA GTG TGT GGC CTA TAC ACA TAT GGG AAG CCT GTC | | | | | | | | | | | | | | | | | 823 |
| Glu Met Asn Val Ser Val Cys Gly Leu Tyr Thr Tyr Gly Lys Pro Val | | | | | | | | | | | | | | | | | |
| 245 | | | | | 250 | | | | | 255 | | | | | | 260 | |
| CCT GGA CAT GTG ACT GTG AGC ATT TGC AGA AAG TAT AGT GAC GCT TCC | | | | | | | | | | | | | | | | | 871 |
| Pro Gly His Val Thr Val Ser Ile Cys Arg Lys Tyr Ser Asp Ala Ser | | | | | | | | | | | | | | | | | |
| | | | 265 | | | | | 270 | | | | | | | 275 | | |
| GAC TGC CAC GGT GAA GAT TCA CAG GCT TTC TGT GAG AAA TTC AGT GGA | | | | | | | | | | | | | | | | | 919 |
| Asp Cys His Gly Glu Asp Ser Gln Ala Phe Cys Glu Lys Phe Ser Gly | | | | | | | | | | | | | | | | | |
| | | 280 | | | | | | 285 | | | | | | 290 | | | |
| CAG CTA AAC AGC CAT GGC TGC TTC TAT CAG CAA GTA AAA ACC AAG GTC | | | | | | | | | | | | | | | | | 967 |
| Gln Leu Asn Ser His Gly Cys Phe Tyr Gln Gln Val Lys Thr Lys Val | | | | | | | | | | | | | | | | | |
| | | 295 | | | | | 300 | | | | | | 305 | | | | |
| TTC CAG CTG AAG AGG AAG GAG TAT GAA ATG AAA CTT CAC ACT GAG GCC | | | | | | | | | | | | | | | | | 1015 |
| Phe Gln Leu Lys Arg Lys Glu Tyr Glu Met Lys Leu His Thr Glu Ala | | | | | | | | | | | | | | | | | |
| | 310 | | | | | 315 | | | | | | 320 | | | | | |
| CAG ATC CAA GAA GAA GGA ACA GTG GTG GAA TTG ACT GGA AGG CAG TCC | | | | | | | | | | | | | | | | | 1063 |
| Gln Ile Gln Glu Glu Gly Thr Val Val Glu Leu Thr Gly Arg Gln Ser | | | | | | | | | | | | | | | | | |
| 325 | | | | | 330 | | | | | 335 | | | | | | 340 | |

FIG.7A-2

54/65

| | |
|---|------|
| AGT GAA ATC ACA AGA ACC ATA ACC AAA CTC TCA TTT GTG AAA GTG GAC | 1111 |
| Ser Glu Ile Thr Arg Thr Ile Thr Lys Leu Ser Phe Val Lys Val Asp | |
| 345 350 355 | |
| TCA CAC TTT CGA CAG GGA ATT CCC TTC TTT GGG CAG GTG CGC CTA GTA | 1159 |
| Ser His Phe Arg Gln Gly Ile Pro Phe Phe Gly Gln Val Arg Leu Val | |
| 360 365 370 | |
| GAT GGG AAA GGC GTC CCT ATA CCA AAT AAA GTC ATA TTC ATC AGA GGA | 1207 |
| Asp Gly Lys Gly Val Pro Ile Pro Asn Lys Val Ile Phe Ile Arg Gly | |
| 375 380 385 | |
| AAT GAA GCA AAC TAT TAC TCC AAT GCT ACC ACG GAT GAG CAT GGC CTT | 1255 |
| Asn Glu Ala Asn Tyr Tyr Ser Asn Ala Thr Thr Asp Glu His Gly Leu | |
| 390 395 400 | |
| GTA CAG TTC TCT ATC AAC ACC ACC AAC GTT ATG GGT ACC TCT CTT ACT | 1303 |
| Val Gln Phe Ser Ile Asn Thr Thr Asn Val Met Gly Thr Ser Leu Thr | |
| 405 410 415 420 | |
| GTT AGG GTC AAT TAC AAG GAT CGT AGT CCC TGT TAC GGC TAC CAG TGG | 1351 |
| Val Arg Val Asn Tyr Lys Asp Arg Ser Pro Cys Tyr Gly Tyr Gln Trp | |
| 425 430 435 | |
| GTG TCA GAA GAA CAC GAA GAG GCA CAT CAC ACT GCT TAT CTT GTG TTC | 1399 |
| Val Ser Glu Glu His Glu Glu Ala His His Thr Ala Tyr Leu Val Phe | |
| 440 445 450 | |
| TCC CCA AGC AAG AGC TTT GTC CAC CTT GAG CCC ATG TCT CAT GAA CTA | 1447 |
| Ser Pro Ser Lys Ser Phe Val His Leu Glu Pro Met Ser His Glu Leu | |
| 455 460 465 | |
| CCC TGT GGC CAT ACT CAG ACA GTC CAG GCA CAT TAT ATT CTG AAT GGA | 1495 |
| Pro Cys Gly His Thr Gln Thr Val Gln Ala His Tyr Ile Leu Asn Gly | |
| 470 475 480 | |
| GGC ACC CTG CTG GGG CTG AAG AAG CTC TCC TTT TAT TAT CTG ATA ATG | 1543 |
| Gly Thr Leu Leu Gly Leu Lys Lys Leu Ser Phe Tyr Tyr Leu Ile Met | |
| 485 490 495 500 | |
| GCA AAG GGA GGC ATT GTC CGA ACT GGG ACT CAT GGA CTG CTT GTG AAG | 1591 |
| Ala Lys Gly Gly Ile Val Arg Thr Gly Thr His Gly Leu Leu Val Lys | |
| 505 510 515 | |

FIG.7A-3

| | | | | | | | | | | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 55/65 | | | | | | | | | | | | | | | |
| CAG | GAA | GAC | ATG | AAG | GGC | CAT | TTT | TCC | ATC | TCA | ATC | CCT | GTG | AAG | TCA |
| Gln | Glu | Asp | Met | Lys | Gly | His | Phe | Ser | Ile | Ser | Ile | Pro | Val | Lys | Ser |
| 520 | | | | 525 | | | | 530 | | | | | | | |
| GAC | ATT | GCT | CCT | GTC | GCT | CGG | TTG | CTC | ATC | TAT | GCT | GTT | TTA | CCT | ACC |
| Asp | Ile | Ala | Pro | Val | Ala | Arg | Leu | Leu | Ile | Tyr | Ala | Val | Leu | Pro | Thr |
| 535 | | | | 540 | | | | 545 | | | | | | | |
| GGG | GAC | GTG | ATT | GGG | GAT | TCT | GCA | AAA | TAT | GAT | GTT | GAA | AAT | TGT | CTG |
| Gly | Asp | Val | Ile | Gly | Asp | Ser | Ala | Lys | Tyr | Asp | Val | Glu | Asn | Cys | Leu |
| 550 | | | | 555 | | | | 560 | | | | | | | |
| GCC | AAC | AAG | GTG | GAT | TTG | AGC | TTC | AGC | CCA | TCA | CAA | AGT | CTC | CCA | GCC |
| Ala | Asn | Lys | Val | Asp | Leu | Ser | Phe | Ser | Pro | Ser | Gln | Ser | Leu | Pro | Ala |
| 565 | | | | 570 | | | | 575 | | | | 580 | | | |
| TCA | CAC | GCC | CAC | CTG | CGA | GTC | ACA | GCG | GCT | CCT | CAG | TCC | GTC | TGC | GCC |
| Ser | His | Ala | His | Leu | Arg | Val | Thr | Ala | Ala | Pro | Gln | Ser | Val | Cys | Ala |
| 585 | | | | 590 | | | | 595 | | | | | | | |
| CTC | CGT | GCT | GTG | GAC | CAA | AGC | GTG | CTG | CTC | ATG | AAG | CCT | GAT | GCT | GAG |
| Leu | Arg | Ala | Val | Asp | Gln | Ser | Val | Leu | Leu | Met | Lys | Pro | Asp | Ala | Glu |
| 600 | | | | 605 | | | | 610 | | | | | | | |
| CTC | TCG | GCG | TCC | TCG | GTT | TAC | AAC | CTG | CTA | CCA | GAA | AAG | GAC | CTC | ACT |
| Leu | Ser | Ala | Ser | Ser | Val | Tyr | Asn | Leu | Leu | Pro | Glu | Lys | Asp | Leu | Thr |
| 615 | | | | 620 | | | | 625 | | | | | | | |
| GGC | TTC | CCT | GGG | CCT | TTG | AAT | GAC | CAG | GAC | GAT | GAA | GAC | TGC | ATC | AAT |
| Gly | Phe | Pro | Gly | Pro | Leu | Asn | Asp | Gln | Asp | Asp | Glu | Asp | Cys | Ile | Asn |
| 630 | | | | 635 | | | | 640 | | | | | | | |
| CGT | CAT | AAT | GTC | TAT | ATT | AAT | GGA | ATC | ACA | TAT | ACT | CCA | GTA | TCA | AGT |
| Arg | His | Asn | Val | Tyr | Ile | Asn | Gly | Ile | Thr | Tyr | Thr | Pro | Val | Ser | Ser |
| 645 | | | | 650 | | | | 655 | | | | 660 | | | |
| ACA | AAT | GAA | AAG | GAT | ATG | TAC | AGC | TTC | CTA | GAG | GAC | ATG | GGC | TTA | AAG |
| Thr | Asn | Glu | Lys | Asp | Met | Tyr | Ser | Phe | Leu | Glu | Asp | Met | Gly | Leu | Lys |
| 665 | | | | 670 | | | | 675 | | | | | | | |
| GCA | TTC | ACC | AAC | TCA | AAG | ATT | CGT | AAA | CCC | AAA | ATG | TGT | CCA | CAG | CTT |
| Ala | Phe | Thr | Asn | Ser | Lys | Ile | Arg | Lys | Pro | Lys | Met | Cys | Pro | Gln | Leu |
| 680 | | | | 685 | | | | 690 | | | | | | | |

FIG.7A-4

56/65

| | |
|---|------|
| CAA CAG TAT GAA ATG CAT GGA CCT GAA GGT CTA CGT GTA GGT TTT TAT | 2167 |
| Gln Gln Tyr Glu Met His Gly Pro Glu Gly Leu Arg Val Gly Phe Tyr | |
| 695 700 705 | |
| GAG TCA GAT GTA ATG GGA AGA GGC CAT GCA CGC CTG GTG CAT GTT GAA | 2215 |
| Glu Ser Asp Val Met Gly Arg Gly His Ala Arg Leu Val His Val Glu | |
| 710 715 720 | |
| GAG CCT CAC ACG GAG ACC GTA CGA AAG TAC TTC CCT GAG ACA TGG ATC | 2263 |
| Glu Pro His Thr Glu Thr Val Arg Lys Tyr Phe Pro Glu Thr Trp Ile | |
| 725 730 735 740 | |
| TGG GAT TTG GTG GTG GTA AAC TCA GCA GGG GTG GCT GAG GTA GGA GTA | 2311 |
| Trp Asp Leu Val Val Val Asn Ser Ala Gly Val Ala Glu Val Gly Val | |
| 745 750 755 | |
| ACA GTC CCT GAC ACC ATC ACC GAG TGG AAG GCA GGG GCC TTC TGC CTG | 2359 |
| Thr Val Pro Asp Thr Ile Thr Glu Trp Lys Ala Gly Ala Phe Cys Leu | |
| 760 765 770 | |
| TCT GAA GAT GCT GGA CTT GGT ATC TCT TCC ACT GCC TCT CTC CGA GCC | 2407 |
| Ser Glu Asp Ala Gly Leu Gly Ile Ser Ser Thr Ala Ser Leu Arg Ala | |
| 775 780 785 | |
| TTC CAG CCC TTC TTT GTG GAG CTT ACA ATG CCT TAC TCT GTG ATT CGT | 2455 |
| Phe Gln Pro Phe Phe Val Glu Leu Thr Met Pro Tyr Ser Val Ile Arg | |
| 790 795 800 | |
| GGA GAG GCC TTC ACA CTC AAG GCC ACG GTC CTA AAC TAC CTT CCC AAA | 2503 |
| Gly Glu Ala Phe Thr Leu Lys Ala Thr Val Leu Asn Tyr Leu Pro Lys | |
| 805 810 815 820 | |
| TGC ATC CGG GTC AGT GTG CAG CTG GAA GCC TCT CCC GCC TTC CTT GCT | 2551 |
| Cys Ile Arg Val Ser Val Gln Leu Glu Ala Ser Pro Ala Phe Leu Ala | |
| 825 830 835 | |
| GTC CCA GTG GAG AAG GAA CAA GCG CCT CAC TGC ATC TGT GCA AAC GGG | 2599 |
| Val Pro Val Glu Lys Glu Gln Ala Pro His Cys Ile Cys Ala Asn Gly | |
| 840 845 850 | |
| CGG CAA ACT GTG TCC TGG GCA GTA ACC CCA AAG TCA TTA GGA AAT GTG | 2647 |
| Arg Gln Thr Val Ser Trp Ala Val Thr Pro Lys Ser Leu Gly Asn Val | |
| 855 860 865 | |

FIG.7A-5

57/65

| | |
|---|------|
| AAT TTC ACT GTG AGC GCA GAG GCA CTA GAG TCT CAA GAG CTG TGT GGG | 2695 |
| Asn Phe Thr Val Ser Ala Glu Ala Leu Glu Ser Gln Glu Leu Cys Gly | |
| 870 875 880 | |
| ACT GAG GTG CCT TCA GTT CCT GAA CAC GGA AGG AAA GAC ACA GTC ATC | 2743 |
| Thr Glu Val Pro Ser Val Pro Glu His Gly Arg Lys Asp Thr Val Ile | |
| 885 890 895 900 | |
| AAG CCT CTG TTG GTT GAA CCT GAA GGA CTA GAG AAG GAA ACA ACA TTC | 2791 |
| Lys Pro Leu Leu Val Glu Pro Glu Gly Leu Glu Lys Glu Thr Thr Phe | |
| 905 910 915 | |
| AAC TCC CTA CTT TGT CCA TCA GGT GGT GAG GTT TCT GAA GAA TTA TCC | 2839 |
| Asn Ser Leu Leu Cys Pro Ser Gly Gly Glu Val Ser Glu Glu Leu Ser | |
| 920 925 930 | |
| CTG AAA CTG CCA CCA AAT GTG GTA GAA GAA TCT GCC CGA GCT TCT GTC | 2887 |
| Leu Lys Leu Pro Pro Asn Val Val Glu Glu Ser Ala Arg Ala Ser Val | |
| 935 940 945 | |
| TCA GTT TTG GGA GAC ATA TTA GGC TCT GCC ATG CAA AAC ACA CAA AAT | 2935 |
| Ser Val Leu Gly Asp Ile Leu Gly Ser Ala Met Gln Asn Thr Gln Asn | |
| 950 955 960 | |
| CTT CTC CAG ATG CCC TAT GGC TGT GGA GAG CAG AAT ATG GTC CTC TTT | 2983 |
| Leu Leu Gln Met Pro Tyr Gly Cys Gly Glu Gln Asn Met Val Leu Phe | |
| 965 970 975 980 | |
| GCT CCT AAC ATC TAT GTA CTG GAT TAT CTA AAT GAA ACA CAG CAG CTT | 3031 |
| Ala Pro Asn Ile Tyr Val Leu Asp Tyr Leu Asn Glu Thr Gln Gln Leu | |
| 985 990 995 | |
| ACT CCA GAG GTC AAG TCC AAG GCC ATT GGC TAT CTC AAC ACT GGT TAC | 3079 |
| Thr Pro Glu Val Lys Ser Lys Ala Ile Gly Tyr Leu Asn Thr Gly Tyr | |
| 1000 1005 1010 | |
| CAG AGA CAG TTG AAC TAC AAA CAC TAT GAT GGC TCC TAC AGC ACC TTT | 3127 |
| Gln Arg Gln Leu Asn Tyr Lys His Tyr Asp Gly Ser Tyr Ser Thr Phe | |
| 1015 1020 1025 | |
| GGG GAG CGA TAT GGC AGG AAC CAG GGC AAC ACC TGG CTC ACA GCC TTT | 3175 |
| Gly Glu Arg Tyr Gly Arg Asn Gln Gly Asn Thr Trp Leu Thr Ala Phe | |
| 1030 1035 1040 | |

FIG. 7A-6

58/65

| | |
|---|------|
| GTT CTG AAG ACT TTT GCC CAA GCT CGA GCC TAC ATC TTC ATC GAT GAA Val Leu Lys Thr Phe Ala Gln Ala Arg Ala Tyr Ile Phe Ile Asp Glu 1045 1050 1055 1060 | 3223 |
| GCA CAC ATT ACC CAA GCC CTC ATA TGG CTC TCC CAG AGG CAG AAG GAC Ala His Ile Thr Gln Ala Leu Ile Trp Leu Ser Gln Arg Gln Lys Asp 1065 1070 1075 | 3271 |
| AAT GGC TGT TTC AGG AGC TCT GGG TCA CTG CTC AAC AAT GCC ATA AAG Asn Gly Cys Phe Arg Ser Ser Gly Ser Leu Leu Asn Asn Ala Ile Lys 1080 1085 1090 | 3319 |
| GGA GGA GTA GAA GAT GAA GTG ACC CTC TCC GCC TAT ATC ACC ATC GCC Gly Gly Val Glu Asp Glu Val Thr Leu Ser Ala Tyr Ile Thr Ile Ala 1095 1100 1105 | 3367 |
| CTT CTG GAG ATT CCT CTC ACA GTC ACT CAC CCT GTT GTC CGC AAT GCC Leu Leu Glu Ile Pro Leu Thr Val Thr His Pro Val Val Arg Asn Ala 1110 1115 1120 | 3415 |
| CTG TTT TGC CTG GAG TCA GCC TGG AAG ACA GCA CAA GAA GGG GAC CAT Leu Phe Cys Leu Glu Ser Ala Trp Lys Thr Ala Gln Glu Gly Asp His 1125 1130 1135 1140 | 3463 |
| GGC AGC CAT GTA TAT ACC AAA GCA CTG CTG GCC TAT GCT TTT GCC CTG Gly Ser His Val Tyr Thr Lys Ala Leu Leu Ala Tyr Ala Phe Ala Leu 1145 1150 1155 | 3511 |
| GCA GGT AAC CAG GAC AAG AGG AAG GAA GTA CTC AAG TCA CTT AAT GAG Ala Gly Asn Gln Asp Lys Arg Lys Glu Val Leu Lys Ser Leu Asn Glu 1160 1165 1170 | 3559 |
| GAA GCT GTG AAG AAA GAC AAC TCT GTC CAT TGG GAG CGC CCT CAG AAA Glu Ala Val Lys Lys Asp Asn Ser Val His Trp Glu Arg Pro Gln Lys 1175 1180 1185 | 3607 |
| CCC AAG GCA CCA GTG GGG CAT TTT TAC GAA CCC CAG GCT CCC TCT GCT Pro Lys Ala Pro Val Gly His Phe Tyr Glu Pro Gln Ala Pro Ser Ala 1190 1195 1200 | 3655 |
| GAG GTG GAG ATG ACA TCC TAT GTG CTC CTC GCT TAT CTC ACG GCC CAG Glu Val Glu Met Thr Ser Tyr Val Leu Leu Ala Tyr Leu Thr Ala Gln 1205 1210 1215 1220 | 3703 |

FIG. 7A-7

59/65

| | |
|---|------|
| CCA GCC CCA ACC TCG GAG GAC CTG ACC TCT GCA ACC AAC ATC GTG AAG | 3751 |
| Pro Ala Pro Thr Ser Glu Asp Leu Thr Ser Ala Thr Asn Ile Val Lys | |
| 1225 1230 1235 | |
| TGG ATC ACG AAG CAG CAG AAT GCC CAG GGC GGT TTC TCC TCC ACC CAG | 3799 |
| Trp Ile Thr Lys Gln Gln Asn Ala Gln Gly Gly Phe Ser Ser Thr Gln | |
| 1240 1245 1250 | |
| GAC ACA GTG GTG GCT CTC CAT GCT CTG TCC AAA TAT GGA GCC GCC ACA | 3847 |
| Asp Thr Val Val Ala Leu His Ala Leu Ser Lys Tyr Gly Ala Ala Thr | |
| 1255 1260 1265 | |
| TTT ACC AGG ACT GGG AAG GCT GCA CAG GTG ACT ATC CAG TCT TCA GGG | 3895 |
| Phe Thr Arg Thr Gly Lys Ala Ala Gln Val Thr Ile Gln Ser Ser Gly | |
| 1270 1275 1280 | |
| ACA TTT TCC AGC AAA TTC CAA GTG GAC AAC AAC AAT CGC CTG TTA CTG | 3943 |
| Thr Phe Ser Ser Lys Phe Gln Val Asp Asn Asn Asn Arg Leu Leu Leu | |
| 1285 1290 1295 1300 | |
| CAG CAG GTC TCA TTG CCA GAG CTG CCT GGG GAA TAC AGC ATG AAA GTG | 3991 |
| Gln Gln Val Ser Leu Pro Glu Leu Pro Gly Glu Tyr Ser Met Lys Val | |
| 1305 1310 1315 | |
| ACA GGA GAA GGA TGT GTC TAC CTC CAG ACC TCC TTG AAA TAC AAT ATT | 4039 |
| Thr Gly Glu Gly Cys Val Tyr Leu Gln Thr Ser Leu Lys Tyr Asn Ile | |
| 1320 1325 1330 | |
| CTC CCA GAA AAG GAA GAG TTC CCC TTT GCT TTA GGA GTG CAG ACT CTG | 4087 |
| Leu Pro Glu Lys Glu Glu Phe Pro Phe Ala Leu Gly Val Gln Thr Leu | |
| 1335 1340 1345 | |
| CCT CAA ACT TGT GAT GAA CCC AAA GCC CAC ACC AGC TTC CAA ATC TCC | 4135 |
| Pro Gln Thr Cys Asp Glu Pro Lys Ala His Thr Ser Phe Gln Ile Ser | |
| 1350 1355 1360 | |
| CTA AGT GTC AGT TAC ACA GGG AGC CGC TCT GCC TCC AAC ATG GCG ATC | 4183 |
| Leu Ser Val Ser Tyr Thr Gly Ser Arg Ser Ala Ser Asn Met Ala Ile | |
| 1365 1370 1375 1380 | |
| GTT GAT GTG AAG ATG GTC TCT GGC TTC ATT CCC CTG AAG CCA ACA GTG | 4231 |
| Val Asp Val Lys Met Val Ser Gly Phe Ile Pro Leu Lys Pro Thr Val | |
| 1385 1390 1395 | |

FIG.7A-8

60/65

| | |
|---|------|
| AAA ATG CTT GAA AGA TCT AAC CAT GTG AGC CGG ACA GAA GTC AGC AGC | 4279 |
| Lys Met Leu Glu Arg Ser Asn His Val Ser Arg Thr Glu Val Ser Ser | |
| 1400 1405 1410 | |
| AAC CAT GTC TTG ATT TAC CTT GAT AAG GTG TCA AAT CAG ACA CTG AGC | 4327 |
| Asn His Val Leu Ile Tyr Leu Asp Lys Val Ser Asn Gln Thr Leu Ser | |
| 1415 1420 1425 | |
| TTG TTC TTC ACG GTT CTG CAA GAT GTC CCA GTA AGA GAT CTC AAA CCA | 4375 |
| Leu Phe Phe Thr Val Leu Gln Asp Val Pro Val Arg Asp Leu Lys Pro | |
| 1430 1435 1440 | |
| GCC ATA GTG AAA GTC TAT GAT TAC TAC GAG ACG GAT GAG TTT GCA ATC | 4423 |
| Ala Ile Val Lys Val Tyr Asp Tyr Tyr Glu Thr Asp Glu Phe Ala Ile | |
| 1445 1450 1455 1460 | |
| GCT GAG TAC AAT GCT CCT TGC AGC AAA GAT CTT GGA AAT GCT TGAAGACCA | 4474 |
| Ala Glu Tyr Asn Ala Pro Cys Ser Lys Asp Leu Gly Asn Ala | |
| 1465 1470 1 | |
| CAAGGCTGAA AAGTGCTTTG CTGGAGTCCT GTTCTCTGAG CTCCACAGAA GACACGTGTT | 4534 |
| TTTGTATCTT TAAAGACTTG ATGAATAAAC ACTTTTCTG GTC | 4577 |

FIG.7A-9

61/65

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Val | Ser | Gly | Lys | Pro | Gln | Tyr | Met | Val | Leu | Val | Pro | Ser | Leu | Leu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| His | Thr | Glu | Thr | Thr | Glu | Lys | Gly | Cys | Val | Leu | Leu | Ser | Tyr | Leu | Asn |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Glu | Thr | Val | Thr | Val | Ser | Ala | Ser | Leu | Glu | Ser | Val | Arg | Gly | Asn | Arg |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ser | Leu | Phe | Thr | Asp | Leu | Glu | Ala | Glu | Asn | Asp | Val | Leu | His | Cys | Val |
| | 50 | | | | | 55 | | | | 60 | | | | | |
| Ala | Phe | Ala | Val | Pro | Lys | Ser | Ser | Ser | Asn | Glu | Glu | Val | Met | Phe | Leu |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Thr | Val | Gln | Val | Lys | Gly | Pro | Thr | Gln | Glu | Phe | Lys | Lys | Arg | Thr | Thr |
| | | | 85 | | | | | | 90 | | | | | 95 | |
| Val | Met | Val | Lys | Asn | Glu | Asp | Ser | Leu | Val | Phe | Val | Gln | Thr | Asp | Lys |
| | | | 100 | | | | | 105 | | | | 110 | | | |
| Ser | Ile | Tyr | Lys | Pro | Gly | Gln | Thr | Val | Lys | Phe | Arg | Val | Val | Ser | Met |
| | 115 | | | | | 120 | | | | | | 125 | | | |
| Asp | Glu | Asn | Phe | His | Pro | Leu | Asn | Glu | Leu | Ile | Pro | Leu | Val | Tyr | Ile |
| | 130 | | | | | 135 | | | | 140 | | | | | |
| Gln | Asp | Pro | Lys | Gly | Asn | Arg | Ile | Ala | Gln | Trp | Gln | Ser | Phe | Gln | Leu |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Glu | Gly | Gly | Leu | Lys | Gln | Phe | Ser | Phe | Pro | Leu | Ser | Ser | Glu | Pro | Phe |
| | | | 165 | | | | | | 170 | | | | | 175 | |
| Gln | Gly | Ser | Tyr | Lys | Val | Val | Val | Gln | Lys | Lys | Ser | Gly | Gly | Arg | Thr |
| | | 180 | | | | | | 185 | | | | 190 | | | |
| Glu | His | Pro | Phe | Thr | Val | Glu | Glu | Phe | Val | Leu | Pro | Lys | Phe | Glu | Val |
| | 195 | | | | | 200 | | | | | | 205 | | | |
| Gln | Val | Thr | Val | Pro | Lys | Ile | Ile | Thr | Ile | Leu | Glu | Glu | Glu | Met | Asn |
| | 210 | | | | | 215 | | | | 220 | | | | | |
| Val | Ser | Val | Cys | Gly | Leu | Tyr | Thr | Tyr | Gly | Lys | Pro | Val | Pro | Gly | His |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Val | Thr | Val | Ser | Ile | Cys | Arg | Lys | Tyr | Ser | Asp | Ala | Ser | Asp | Cys | His |
| | | | 245 | | | | | | 250 | | | | | 255 | |
| Gly | Glu | Asp | Ser | Gln | Ala | Phe | Cys | Glu | Lys | Phe | Ser | Gly | Gln | Leu | Asn |
| | | 260 | | | | | | 265 | | | | 270 | | | |
| Ser | His | Gly | Cys | Phe | Tyr | Gln | Gln | Val | Lys | Thr | Lys | Val | Phe | Gln | Leu |
| | 275 | | | | | 280 | | | | | | 285 | | | |
| Lys | Arg | Lys | Glu | Tyr | Glu | Met | Lys | Leu | His | Thr | Glu | Ala | Gln | Ile | Gln |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Glu | Glu | Gly | Thr | Val | Val | Glu | Leu | Thr | Gly | Arg | Gln | Ser | Ser | Glu | Ile |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |

FIG.7B-1

Thr Arg Thr Ile Thr Lys Leu Ser Phe Val Lys Val Asp Ser His Phe
 325 330 335
 Arg Gln Gly Ile Pro Phe Phe Gly Gln Val Arg Leu Val Asp Gly Lys
 340 345 350
 Gly Val Pro Ile Pro Asn Lys Val Ile Phe Ile Arg Gly Asn Glu Ala
 355 360 365
 Asn Tyr Tyr Ser Asn Ala Thr Thr Asp Glu His Gly Leu Val Gln Phe
 370 375 380
 Ser Ile Asn Thr Thr Asn Val Met Gly Thr Ser Leu Thr Val Arg Val
 385 390 395 400
 Asn Tyr Lys Asp Arg Ser Pro Cys Tyr Gly Tyr Gln Trp Val Ser Glu
 405 410 415
 Glu His Glu Glu Ala His His Thr Ala Tyr Leu Val Phe Ser Pro Ser
 420 425 430
 Lys Ser Phe Val His Leu Glu Pro Met Ser His Glu Leu Pro Cys Gly
 435 440 445
 His Thr Gln Thr Val Gln Ala His Tyr Ile Leu Asn Gly Gly Thr Leu
 450 455 460
 Leu Gly Leu Lys Lys Leu Ser Phe Tyr Tyr Leu Ile Met Ala Lys Gly
 465 470 475 480
 Gly Ile Val Arg Thr Gly Thr His Gly Leu Leu Val Lys Gln Glu Asp
 485 490 495
 Met Lys Gly His Phe Ser Ile Ser Ile Pro Val Lys Ser Asp Ile Ala
 500 505 510
 Pro Val Ala Arg Leu Leu Ile Tyr Ala Val Leu Pro Thr Gly Asp Val
 515 520 525
 Ile Gly Asp Ser Ala Lys Tyr Asp Val Glu Asn Cys Leu Ala Asn Lys
 530 535 540
 Val Asp Leu Ser Phe Ser Pro Ser Gln Ser Leu Pro Ala Ser His Ala
 545 550 555 560
 His Leu Arg Val Thr Ala Ala Pro Gln Ser Val Cys Ala Leu Arg Ala
 565 570 575
 Val Asp Gln Ser Val Leu Leu Met Lys Pro Asp Ala Glu Leu Ser Ala
 580 585 590
 Ser Ser Val Tyr Asn Leu Leu Pro Glu Lys Asp Leu Thr Gly Phe Pro
 595 600 605
 Gly Pro Leu Asn Asp Gln Asp Asp Glu Asp Cys Ile Asn Arg His Asn
 610 615 620
 Val Tyr Ile Asn Gly Ile Thr Tyr Thr Pro Val Ser Ser Thr Asn Glu
 625 630 635 640
 Lys Asp Met Tyr Ser Phe Leu Glu Asp Met Gly Leu Lys Ala Phe Thr
 645 650 655

FIG.7B-2

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| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Ser | Lys | Ile | Arg | Lys | Pro | Lys | Met | Cys | Pro | Gln | Leu | Gln | Gln | Tyr |
| | | | 660 | | | | | 665 | | | | | 670 | | |
| Glu | Met | His | Gly | Pro | Glu | Gly | Leu | Arg | Val | Gly | Phe | Tyr | Glu | Ser | Asp |
| | | 675 | | | | | 680 | | | | | 685 | | | |
| Val | Met | Gly | Arg | Gly | His | Ala | Arg | Leu | Val | His | Val | Glu | Glu | Pro | His |
| | 690 | | | | | 695 | | | | | 700 | | | | |
| Thr | Glu | Thr | Val | Arg | Lys | Tyr | Phe | Pro | Glu | Thr | Trp | Ile | Trp | Asp | Leu |
| 705 | | | | | 710 | | | | | 715 | | | | | 720 |
| Val | Val | Val | Asn | Ser | Ala | Gly | Val | Ala | Glu | Val | Gly | Val | Thr | Val | Pro |
| | | | 725 | | | | | 730 | | | | | | 735 | |
| Asp | Thr | Ile | Thr | Glu | Trp | Lys | Ala | Gly | Ala | Phe | Cys | Leu | Ser | Glu | Asp |
| | | 740 | | | | | | 745 | | | | | 750 | | |
| Ala | Gly | Leu | Gly | Ile | Ser | Ser | Thr | Ala | Ser | Leu | Arg | Ala | Phe | Gln | Pro |
| | 755 | | | | | | 760 | | | | | 765 | | | |
| Phe | Phe | Val | Glu | Leu | Thr | Met | Pro | Tyr | Ser | Val | Ile | Arg | Gly | Glu | Ala |
| | 770 | | | | | 775 | | | | | 780 | | | | |
| Phe | Thr | Leu | Lys | Ala | Thr | Val | Leu | Asn | Tyr | Leu | Pro | Lys | Cys | Ile | Arg |
| 785 | | | | | 790 | | | | | 795 | | | | | 800 |
| Val | Ser | Val | Gln | Leu | Glu | Ala | Ser | Pro | Ala | Phe | Leu | Ala | Val | Pro | Val |
| | | | 805 | | | | | 810 | | | | | | 815 | |
| Glu | Lys | Glu | Gln | Ala | Pro | His | Cys | Ile | Cys | Ala | Asn | Gly | Arg | Gln | Thr |
| | | 820 | | | | | | 825 | | | | | 830 | | |
| Val | Ser | Trp | Ala | Val | Thr | Pro | Lys | Ser | Leu | Gly | Asn | Val | Asn | Phe | Thr |
| | 835 | | | | | | 840 | | | | | 845 | | | |
| Val | Ser | Ala | Glu | Ala | Leu | Glu | Ser | Gln | Glu | Leu | Cys | Gly | Thr | Glu | Val |
| | 850 | | | | | 855 | | | | | 860 | | | | |
| Pro | Ser | Val | Pro | Glu | His | Gly | Arg | Lys | Asp | Thr | Val | Ile | Lys | Pro | Leu |
| 865 | | | | | 870 | | | | | 875 | | | | | 880 |
| Leu | Val | Glu | Pro | Glu | Gly | Leu | Glu | Lys | Glu | Thr | Thr | Phe | Asn | Ser | Leu |
| | | | 885 | | | | | 890 | | | | | | 895 | |
| Leu | Cys | Pro | Ser | Gly | Gly | Glu | Val | Ser | Glu | Glu | Leu | Ser | Leu | Lys | Leu |
| | | 900 | | | | | | 905 | | | | | 910 | | |
| Pro | Pro | Asn | Val | Val | Glu | Glu | Ser | Ala | Arg | Ala | Ser | Val | Ser | Val | Leu |
| | | 915 | | | | | 920 | | | | | 925 | | | |
| Gly | Asp | Ile | Leu | Gly | Ser | Ala | Met | Gln | Asn | Thr | Gln | Asn | Leu | Leu | Gln |
| | 930 | | | | | 935 | | | | | 940 | | | | |
| Met | Pro | Tyr | Gly | Cys | Gly | Glu | Gln | Asn | Met | Val | Leu | Phe | Ala | Pro | Asn |
| 945 | | | | | 950 | | | | | 955 | | | | | 960 |
| Ile | Tyr | Val | Leu | Asp | Tyr | Leu | Asn | Glu | Thr | Gln | Gln | Leu | Thr | Pro | Glu |
| | | | 965 | | | | | 970 | | | | | | 975 | |
| Val | Lys | Ser | Lys | Ala | Ile | Gly | Tyr | Leu | Asn | Thr | Gly | Tyr | Gln | Arg | Gln |
| | | | 980 | | | | | 985 | | | | | 990 | | |

FIG.7B-3

[illegible]

FIG. 7B-4

65/65

| | | | | | | | | | | | | | | | |
|--|-----|------|-----|------|-----|------|-----|------|-----|------|-----|-----|-----|-----|-----|
| Cys | Asp | Glu | Pro | Lys | Ala | His | Thr | Ser | Phe | Gln | Ile | Ser | Leu | Ser | Val |
| 1330 | | | | 1335 | | | | 1340 | | | | | | | |
| Ser | Tyr | Thr | Gly | Ser | Arg | Ser | Ala | Ser | Asn | Met | Ala | Ile | Val | Asp | Val |
| 345 | | 1350 | | | | 1355 | | | | 1360 | | | | | |
| Lys | Met | Val | Ser | Gly | Phe | Ile | Pro | Leu | Lys | Pro | Thr | Val | Lys | Met | Leu |
| <i>Glu Arg Ser Asn His Val Ser Arg Thr Glu Val Ser Ser Asn His Val</i> | | | | | | | | | | | | | | | |
| <i>Leu Ile Tyr Leu Asp Lys Val Ser Asn Gln Thr Leu Ser Leu Phe Phe</i> | | | | | | | | | | | | | | | |
| <i>Thr Val Leu Gln Asp Val Pro Val Arg Asp Leu Lys Pro Ala Ile Val</i> | | | | | | | | | | | | | | | |
| 1410 | | | | 1415 | | | | 1420 | | | | | | | |
| Lys | Val | Tyr | Asp | Tyr | Tyr | Glu | Thr | Asp | Glu | Phe | Ala | Ile | Ala | Glu | Tyr |
| 425 | | 1430 | | | | 1435 | | | | 1440 | | | | | |
| Asn | Ala | Pro | Cys | Ser | Lys | Asp | Leu | Gly | Asn | Ala | | | | | |
| 1445 | | | | 1450 | | | | | | | | | | | |

FIG.7B-5

FIG. 7B-5